

1 IN THE UNITED STATES DISTRICT COURT  
2 FOR THE NORTHERN DISTRICT OF OKLAHOMA  
3  
4 STATE OF OKLAHOMA, ex rel. )  
5 W.A. DREW EDMONDSON, in his )  
capacity as ATTORNEY GENERAL)  
6 OF THE STATE OF OKLAHOMA, )  
et al. )  
7 Plaintiffs, )  
vs. ) CASE NO. 05-329-GKF-PJC  
8 TYSON FOODS, INC., et al., )  
9 )  
10 Defendants. )  
11  
12  
13  
14 TRANSCRIPT OF NONJURY TRIAL PROCEEDINGS  
15 JANUARY 12, 2010  
BEFORE GREGORY K. FRIZZELL, U.S. DISTRICT JUDGE  
16 VOLUME 92, A.M. SESSION  
17  
18 APPEARANCES:  
19 For the Plaintiffs: MR. W.A. DREW EDMONDSON  
20 Attorney General  
MS. KELLY FOSTER  
21 Assistant Attorney General  
State of Oklahoma  
22 313 N.E. 21st St.  
Oklahoma City, OK 73105  
23  
24  
25

1 (APPEARANCES CONTINUED) MR. M. DAVID RIGGS  
2 MR. DAVID P. PAGE  
3 MR. RICHARD T. GARREN  
Riggs Abney Neal Turpen  
Orbison & Lewis  
502 W. 6th Street  
Tulsa, OK 74119

5

6 MR. ROBERT A. NANCE  
7 MS. SHARON GENTRY  
Riggs Abney Neal Turpen  
Orbison & Lewis  
8 5801 Broadway  
Extension 101  
Oklahoma City, OK 73118

10 MR. LOUIS W. BULLOCK  
11 MR. ROBERT BLAKEMORE  
Bullock Bullock &  
Blakemore  
12 110 W. 7th, Ste 770  
Tulsa, OK 74119

13

14 MR. FREDERICK C. BAKER  
MS. ELIZABETH CLAIRE XIDIS  
MS. INGRID MOLL  
Motley Rice LLC  
15 28 Bridgeside  
P.O. Box 1792  
Mount Pleasant, SC 29465

16

17

18 For Tyson Foods: MR. ROBERT W. GEORGE  
19 Tyson Foods, Inc.  
2210 West Oaklawn Drive  
20 Springdale, AR 72701

21

22 MR. JAY THOMAS JORGENSEN  
MR. THOMAS GREEN  
23 MR. MARK HOPSON  
MR. GORDON D. TODD  
Sidley Austin LLP  
1501 K St. NW  
24 Washington, DC 20005

25

1 (APPEARANCES CONTINUED)

2 For Cargill: MR. JOHN H. TUCKER  
MS. THERESA HILL  
Rhodes Hieronymus Jones  
Tucker & Gable  
100 W. 5th St., Ste 400  
Tulsa, OK 74103

5 MR. DELMAR R. EHRICH  
6 MS. KRISANN KLEIBACKER LEE  
7 MR. BRUCE JONES  
Faerge & Benson  
8 90 S. 7th St., Ste 2200  
Minnaepolis, MN 54402

9 For Simmons Foods: MR. JOHN R. ELROD  
10 MS. VICKI BRONSON  
Conner & Winters  
11 211 E. Dickson St.  
Fayetteville, AR 72701

12 For Peterson Farms: MR. A. SCOTT McDANIEL  
13 MR. PHILIP HIXON  
14 MS. NICOLE LONGWELL  
15 MR. CRAIG MIRKES  
McDaniel Hixon Longwell &  
Acord PLLC  
16 320 S. Boston, Ste 700  
Tulsa, OK 74103

17 For George's: MR. WOODY BASSETT  
18 MR. VINCENT O. CHADICK  
19 MR. JAMES GRAVES  
MS. K.C. TUCKER  
20 MR. GARY WEEKS  
Bassett Law Firm  
P.O. Box 3618  
Fayetteville, AR 72702

21 For Cal-Maine: MR. ROBERT SANDERS  
22 Young Williams P.A.  
P.O. Box 23059  
23 Jackson, MS 39225

24 MR. ROBERT P. REDEMANN  
25 Perrine McGivern Redemann  
Reid Berry & Taylor PLLC  
P.O. Box 1710  
Tulsa, OK 74101

	<b>INDEX</b>	
	<b>WITNESSES ON BEHALF OF THE DEFENDANTS</b>	<b>PAGE</b>
1		
2		
3		
4	<b>DR. TIMOTHY SULLIVAN</b>	
5	Cont'd Redirect by Mr. George	10737
6		
7	<b>STEPHEN THOMPSON</b>	
8	Cross-Examination by Mr. Nance	10768
9	Redirect Examination by Mr. McDaniel	10778
10	Redirect Examination by Mr. Elrod	10826
11	Redirect Examination by Mr. Hopson	10829
12	Recross Examination by Mr. Nance	10835
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

1

**PROCEEDINGS**

2 JANUARY 12, 2010:

3 THE COURT: When is this matter being  
4 argued before the Tenth Circuit? It's this week, is  
5 it not?

6 MR. GEORGE: Someone else may speak to it.

7 I don't believe there's been a date set for --

8 MR. BULLOCK: The Cherokees still have to  
9 file their reply brief, and argument hasn't been  
10 set.

11 THE COURT: I thought it had been set for  
12 argument in January.

13 MR. BULLOCK: No.

14 MR. GEORGE: Not to my knowledge.

15 MR. BULLOCK: We're probably going to be  
16 late and incur some anger if, in fact, you're  
17 right.

18 MR. GEORGE: I'm not allowed to go to  
19 Denver very often, Your Honor, so I've entrusted  
20 that to someone else. But to my knowledge, there's  
21 no argument set.

22 THE COURT: Very well. Thank you.

23 **DR. TIMOTHY SULLIVAN,**

24 having been previously duly sworn, was called as a  
25 witness and testified as follows:

1

**CONTINUED DIRECT EXAMINATION**

2 BY MR. GEORGE:

3 Q. Doctor, could you take your notebook and turn  
4 to tab 11, the aerial photograph of the Watts  
5 lagoons.

6 A. Yes.

7 Q. Is it true, Doctor, that you mentioned to me  
8 this morning that you think you may have misspoke in  
9 an exchange we had about this particular exhibit?

10 A. That's correct.

11 Q. I want to clear up the record here, if we can.  
12 Doctor, this particular photograph that has been  
13 introduced as Defendants' Joint Exhibit 1454, I  
14 believe at one point yesterday you said you thought  
15 this was in your report, this photograph?

16 A. Correct.

17 Q. Was this particular photograph in your report?

18 A. No.

19 Q. You did evaluate aerial photography of this  
20 location; is that right?

21 A. Yes, I did, and it was in my considered  
22 materials.

23 Q. Just that this one photo was not an actual  
24 exhibit in your report, correct?

25 A. That's correct.

1 Q. Thank you. Doctor, we talked a little bit  
2 yesterday about overland flow, and I want to kind of  
3 pick up there, if we can.

4 Are there some substances that are more  
5 susceptible to various types of overland flow than  
6 others?

7 A. I think the way I would phrase it is not so  
8 much susceptibility to overland flow as an issue  
9 whereby the flow paths followed by the water will  
10 have different likelihoods of carrying substances.

11 In particular, the flow paths that have a  
12 lot of contact with the soil, the deep flow paths  
13 that -- the interflow through the shallow soils lose  
14 a lot of opportunity for interaction between the  
15 water and the soils.

16 In those flow paths, substances that are  
17 what we call conservative, like nitrate, for  
18 example, or chloride, they tend to not adsorb to  
19 soil particles, and they move right with the water.  
20 But substances like phosphorus tend to adsorb to  
21 soils and not move with that water when it has a lot  
22 of contact with soil.

23 But for the overland flow where there's  
24 less contact with soil, there's more opportunity to  
25 transport the phosphorus. But in that overland

1 flow, you also can transport the conservative  
2 substances as well.

3 Q. Doctor, what factors on a field, say a pasture,  
4 control the propensity of phosphorus to move off a  
5 field in overland flow?

6 A. Well, the main controlling factor is whether,  
7 in fact, you have overland flow. That is, by far,  
8 the most important consideration. There will be  
9 some pasture areas that may have it, and there will  
10 be many pasture areas that will not.

11 And whether or not you have overland flow  
12 is determined by, in particular, the soil  
13 characteristics, the infiltration rate, the  
14 distribution of sediment sizes, soil texture, and  
15 the steepness of the slope. So those are all  
16 involved in determining if you have overland flow.

17 Then plus the hydrology we talked about  
18 yesterday is the groundwater coming up during storms  
19 in certain locations to the point where it saturates  
20 the soil.

21 Q. Doctor, I've already been handed a note that  
22 you and I both need to slow down again, so I'm  
23 reminding myself. Now I'll remind you.

24 MR. GEORGE: Sorry, Your Honor.

25 THE WITNESS: Thank you.

1 Q. (By Mr. George) Doctor, are you familiar with  
2 the term "critical source area"?

3 A. Yes.

4 Q. And what does that mean with regard to the  
5 movement of nutrients?

6 A. A critical source area is an area where you  
7 have an overlap of source and opportunity for  
8 transport. So with respect to phosphorus, in order  
9 for phosphorus to move in any appreciable quantity  
10 to a stream, you need to have a quantity of  
11 phosphorus at that particular site, and the  
12 transport has to be able to move that phosphorus  
13 from that site to the stream. And that's what we  
14 discussed; that largely is the overland flow  
15 process. So when those two overlap, that's the  
16 critical source area.

17 If you've got the supply but no transport,  
18 there's not a major risk to movement into the  
19 stream. If you've got the transport and not the  
20 source, similarly, there's not a major risk of  
21 movement. It's where the two overlap.

22 Q. Doctor, in light of that, in order to  
23 understand the potential for phosphorus to run off  
24 of a particular field, is it sufficient to look only  
25 at soil test phosphorus?

1 A. No. Soil test phosphorus is one way to get a  
2 handle on the source, but it tells you nothing about  
3 the transport. You have to look at the two together  
4 to identify where those critical source areas are.  
5 They are also called hotspots by a lot of  
6 scientists.

7 Q. Doctor, let's talk about some of the factors  
8 that may influence the transport potential of the  
9 critical source discussion that we've been having.

10 To what extent does the water flow path  
11 impact the transport potential?

12 A. That's the most important determination is the  
13 flow path.

14 Q. As we were discussing yesterday, we defined  
15 some terms including "overland flow" and different  
16 types of overland flow. One thing I think we missed  
17 and I want to cover now is runoff. You're aware the  
18 term "runoff" has been used throughout this trial?

19 A. Yes.

20 Q. And do you have a working definition of  
21 "runoff," and can you explain how it may be  
22 different from overland flow?

23 A. Okay. There are a couple of issues here. One  
24 is, is that the term "runoff" is used in different  
25 ways. It's my belief that those differences can

1 introduce a lot of confusion. And in reviewing the  
2 testimonies in this trial, that was apparent to me  
3 that people were using the term in different ways.

4 Runoff is a hydrological term, and what it  
5 means is during storms, water that moves into the  
6 stream, that's runoff. And so you can quantify  
7 runoff as the total amount of stream flow. And that  
8 gives you an indication of all the water that -- for  
9 example, we can talk about the runoff to Lake  
10 Tenkiller. What's the total amount of stream water  
11 during a storm, storm runoff that gets to Lake  
12 Tenkiller. But for -- the water gets there from  
13 rainfall, but it follows different pathways to get  
14 there.

15 And we talked about the overland flow. We  
16 talked about the interflow and the deep flow, these  
17 different pathways. And with a substance like  
18 phosphorus, the pathway followed has a very  
19 important influence on the transport of that  
20 phosphorus.

21 But in terms of breaking runoff down so we  
22 can say, well, we've got the overland flow part and  
23 we talked about two different types of overland  
24 flow, but the end result is the same. We've got  
25 interflow, which is shallow and lateral, then the

1 deep flow.

2                 Some people, when they use the term  
3 "runoff," they're talking -- I believe they're  
4 talking about the overland flow component by  
5 itself. And that's really an incorrect way to  
6 evaluate that.

7                 Also sometimes when people use the term  
8 "runoff," what they mean is movement of phosphorus  
9 or some other constituent into a stream. And I  
10 recognize that people commonly use the term that  
11 way, but in the scientific evaluation like this, I  
12 think we have to be more precise about the words  
13 that we use. And "runoff" is really a hydrological  
14 term. It's talking about movement of water, not  
15 moving of phosphorus. I think we need to be careful  
16 to keep those distinctions in mind.

17 Q. Doctor, are all pastures and all areas of all  
18 pastures created equal in terms of their propensity  
19 to generate overland flow?

20 A. No.

21 Q. Does it require a site-specific evaluation?

22 A. Yes, very much so.

23 Q. Doctor, if phosphorus moves off of a field,  
24 does it necessarily reach flowing waters?

25 A. No.

1 Q. Why not?

2 A. Well, if the water moves off the field -- like,  
3 for example, on a field, you can have areas that  
4 generate overland flow. And then as you move  
5 further down the field, you may get to an area where  
6 it no longer generates overland flow in that  
7 particular storm size and the water infiltrates down  
8 into the soil there. So you may have a hill slope,  
9 you have some overland flow at the top, and it  
10 percolates and infiltrates down into the soil where  
11 it's no longer overland flow.

12 So somewhere in that hill slope, it had the  
13 chance to interact with soil, thereby removing much  
14 or all of that phosphorus that was in the overland  
15 flow originally. So that's one issue.

16 But another issue is that the fields are  
17 located at variable distances from streams.  
18 Sometimes there's a stream right in the field or  
19 right below the field. Other times, the nearest  
20 stream might be a mile away or more. So you can  
21 have overland flow in different places that  
22 eventually infiltrates and never gets to a stream  
23 without that soil contact.

24 You can also have overland flow go into a  
25 ditch line, but that ditch line can have multiple

1 fates. It may flow into a stream, it may not. It  
2 may -- it may be dug all the way to a stream, but  
3 before the water gets there, it infiltrates down  
4 into the soil in the bottom of the ditch.

5 There's all different types of situations  
6 in terms of whether or not that water will  
7 eventually reach a stream.

8 Q. Doctor, you've reviewed the testimony of  
9 Dr. Engel in this courtroom, have you not?

10 A. Yes, I have.

11 Q. And you saw that Dr. Engel testified that once  
12 phosphorus begins to move off of a field, it will  
13 necessarily continue in motion until it reaches the  
14 reservoir at the bottom of the watershed? Did you  
15 see that?

16 A. Yes, I've seen that.

17 Q. Do you agree with that assumption?

18 A. No. There's no basis for that claim at all, in  
19 my view.

20 Q. Doctor, as part of your work in this case, did  
21 you review any regulations or restrictions placed on  
22 the use of poultry litter as a fertilizer or soil  
23 conditioner in the watershed?

24 A. Yes, I did.

25 Q. Specifically, what type of regulations or

1 restrictions did you look at?

2 A. In terms of the on-the-ground restrictions?

3 Q. Yes, sir.

4 A. Setbacks for litter application from streams,  
5 instructions to not spread on areas that flood, to  
6 not spread on frozen soils, to not spread on steep  
7 terrain, to not spread on shallow soils. So there  
8 are a number of rules that are in place that govern  
9 the application of litter.

10 Q. Doctor, did you review the restrictions such as  
11 those you've just described in Code 590?

12 A. Yes.

13 Q. Did you review Animal Waste Management Plans or  
14 Nutrient Management Plans as well?

15 A. Nutrient Management Plans, yes.

16 Q. Doctor, are you a legal expert in the rules and  
17 regulations governing litter application?

18 A. No.

19 Q. Was it necessary for you to be a legal expert  
20 on the rules and regulations to perform your work in  
21 this case?

22 A. No.

23 Q. How were the rules and the restrictions and the  
24 plans that you've just described important to your  
25 work in this case as a scientist?

1 A. Well, as a scientist, what was important is for  
2 me to see if the rules and regulations made sense  
3 relative to the state of the scientific  
4 understanding on phosphorus movement. And the  
5 scientific understanding on phosphorus movement has  
6 to do with these critical source areas or hotspots  
7 and the reasons for those and the different flow  
8 paths followed by the water.

9 So what was important to me was to see if  
10 those kinds of considerations were appropriately  
11 incorporated into the regulations. And it's my view  
12 that they are.

13 Q. Based upon your review of Animal Waste  
14 Management Plans or Nutrient Management Plans and  
15 the rules and regulations that we've talked about,  
16 do the systems in place from a regulatory standpoint  
17 in this watershed account for some of the hydrologic  
18 factors that have an effect on the generation of  
19 overland flow?

20 A. Yes, they do.

21 Q. Did you note any restrictions on the  
22 application of litter to frozen or saturated soils?

23 A. Yes.

24 Q. Is that important in your analysis?

25 A. Yes. If the soils are frozen, then that

1 provides an enhanced opportunity for overland flow,  
2 if it rains on frozen soils.

3 Q. Did you note any restrictions on litter  
4 application on areas with steep slopes?

5 A. Yes.

6 Q. And how was that important to your analysis?

7 A. Well, one of the issues that helps regulate the  
8 risk of overland flow is the steepness of the  
9 slope. And in general, all things being equal, if  
10 the slope is steeper, there's a higher risk.

11 Q. Doctor, I believe you mentioned that one of the  
12 things you noted was some setback requirements from  
13 streams; is that right?

14 A. Yes.

15 Q. How was that important to your analysis?

16 A. Well, the hydrologically active areas, the  
17 areas that are likely to generate overland flow in a  
18 sufficiently large storm, you can find them  
19 anywhere, but they tend to be most commonly found  
20 close to the streams.

21 And the major reason for that is because  
22 the groundwater movement is moving from the hill  
23 slope down towards the stream, and so you have a  
24 higher likelihood that you will get the type of  
25 overland flow that results when the groundwater

1 comes up right to the surface, and then when it  
2 rains, there's no place for the water to go except  
3 sideways as overland flow.

4 And that's our saturated -- our saturation  
5 excess overland flow. So that type is far more  
6 likely to occur in proximity to the stream in those  
7 riparian areas.

8 Q. Doctor, did you note any restrictions in your  
9 review on the application of litter to shallow  
10 soils?

11 A. Yes.

12 Q. And was that important to your analysis?

13 A. That really was not important to the analysis  
14 that I conducted, because I was focused on the  
15 potential for impacts on the streams and the soil  
16 issues. I think it's important that that regulation  
17 be there as a way of protecting the groundwater  
18 resources.

19 Q. Now, Doctor, based upon the Nutrient Management  
20 Plans you reviewed, including those from the state  
21 of Arkansas, in your judgment, do those plans take  
22 into consideration both source and transport  
23 considerations?

24 A. Yes.

25 Q. Okay. All right, Doctor. Let's move to your

1 review of some of the specific work of experts for  
2 the State of Oklahoma in this case.

3 As part of your work in this case, did you  
4 review the reports and work of various State  
5 experts?

6 A. Yes, I did.

7 Q. Let me ask you about some of the specific lines  
8 of evidence that have been put forward by the State  
9 to support its claims of impact upon streams and  
10 rivers from poultry litter. You reviewed the  
11 State's edge-of-field sampling program?

12 A. Yes, I have.

13 Q. And in your judgment, how important are these  
14 edge-of-field samples to the State's causation case?

15 A. I think they're critical to the State's  
16 causation case because the edge of field is really  
17 the type of data that the State uses in a number of  
18 these expert reports and analyses to try to  
19 establish a connection between what's on the field  
20 and what's in the stream.

21 Q. Doctor, I believe you testified yesterday, but  
22 I want to make clear, you have actual field  
23 experience in gathering and using edge-of-field  
24 samples, correct?

25 A. Yes, I do.

1 Q. Based upon your review, are the edge-of-field  
2 samples collected by the State in this case  
3 representative of what runs off of a litter-amended  
4 field?

5 A. No.

6 Q. Why not?

7 A. The edge-of-field samples were collected  
8 largely from ditches. There was no permission  
9 granted to go onto the landowner's land and set up  
10 an apparatus with which to collect flow coming off  
11 of pastureland. And by and large, those samples  
12 were not collected from flowing water; they were  
13 collected from a ditch that was convenient to the  
14 road where the samplers could get without having  
15 permission to get onto the land.

16 So there's no way to know where that water  
17 came from. Perhaps some of it came off a field. We  
18 don't know. It may have come from something upslope  
19 associated with that ditch. And if it did come off  
20 the field, we don't know what the source of  
21 phosphorus on the field was that may have  
22 contributed the phosphorus to the edge-of-field  
23 water.

24 Q. Doctor, you mentioned that some samples were  
25 collected from ditches. Did you note in your review

1 any samples that were collected from puddles?

2 A. Yes.

3 Q. Are those sort of edge-of-field samples  
4 representative of what flows off of a litter-amended  
5 field?

6 A. There's no way to know where the water came  
7 from. It could have come from one place or from  
8 many different places. And what that place was,  
9 there's no information to really tell us that.

10 Q. Now, Doctor, in addition to reviewing the  
11 photographs, did you look at the field notes from  
12 the team that actually collected the samples?

13 A. Yes, I did.

14 Q. And in terms of documentation of flow, what did  
15 you see in those field notes?

16 A. I didn't really see documentation of flow. In  
17 terms of documentation of flow, there were, you  
18 know, a few instances and testimony that I saw, a  
19 few cases that they may have been flowing water, but  
20 by and large, that was not the case.

21 Q. Is that important to your analysis?

22 A. Well, it is, because -- for two reasons.

23 Number one is trying to figure out where that water  
24 came from. We don't know where it came from. I'm  
25 not sure what value it is in this kind of

1 investigation.

2           But then beyond that, even if we knew where  
3 it came from, we don't know whether it was flowing  
4 somewhere else or it just stayed in that puddle or  
5 that ditch and eventually infiltrated into the soil.

6 Q. Doctor, did you also review Dr. Engel's and  
7 Dr. Stevenson's poultry house density correlation  
8 analysis?

9 A. Yes, I did.

10 Q. What did you understand to have been the  
11 purpose of that analysis?

12 A. The purpose of that analysis was to evaluate  
13 the relationship between poultry house density, as  
14 they estimated it, and the phosphorus concentration  
15 in the stream and perhaps other parameters as well.  
16 But the main focus was phosphorus.

17 Q. Do you agree that the correlations they  
18 calculated between poultry house density and  
19 phosphorus concentration show that poultry litter  
20 application is responsible for elevated phosphorus  
21 concentrations?

22 A. No.

23 Q. Why not?

24 A. Well, for multiple reasons. One is that a  
25 correlation does not demonstrate causality. It just

1 indicates that two variables are related to each  
2 other in space or in time. We can talk about that  
3 in detail, if you want, but that's the first reason.

4 Q. What is a cross-correlation?

5 A. A cross-correlation is a situation whereby you  
6 look at two variables and they related to each  
7 other, but that relationship may be influenced or  
8 mediated by a relationship with a third variable or  
9 multiple other variables.

10 So if A and B are correlated, you might  
11 say, well, A causes B. But perhaps C causes A -- or  
12 C causes B, but A and C are related. So it  
13 confounds the interpretation of what the correlation  
14 means.

15 Q. Did the State's regression analysis account for  
16 alternative potential causes that cross-correlate  
17 with poultry house density?

18 A. Well, Dr. Engel actually did report a  
19 statistically significant correlation between septic  
20 systems and poultry house density. But then he  
21 dismissed that for what I believe to be insufficient  
22 grounds.

23 Q. Does that cross-correlation confound the  
24 analysis, in your view?

25 A. Yes.

1 Q. Doctor, did you perform any analysis to examine  
2 other cross-correlations between poultry house  
3 density and potential sources of phosphorus?

4 A. Yes, I did.

5 Q. Can you turn in your binder to tab 21.

6 Actually, 22.

7 A. Yes.

8 Q. And find Defendants' Joint Exhibit 2257. Can  
9 you identify that document for the record, please.

10 A. That's a figure from my report.

11 Q. Was this figure prepared under your direction?

12 A. Yes.

13 Q. And can you describe generally the source of  
14 the data or information that is shown in this  
15 exhibit?

16 A. Yes. The source of the information would be  
17 Dr. Engel's materials.

18 Q. Let's do a few of these at a time. Can you  
19 turn to the next tab, Doctor, and find Defendants'  
20 Joint Exhibit 2258.

21 A. Yes.

22 Q. And can you identify the source of the data  
23 that is shown.

24 A. Yes. That's also information from Dr. Engel's  
25 considered materials presented as a figure in my

1 report.

2 Q. Was this exhibit prepared under your direction?

3 A. Yes.

4 Q. And then the last tab, tab 24, Doctor, could  
5 you find Defendants' Joint Exhibit 2259.

6 A. Yes.

7 Q. And could you identify generally the source of  
8 the information and data that's shown in this  
9 figure.

10 A. This was from -- data from USDA Census of  
11 Agriculture.

12 Q. Is Dr. Engel's poultry house density data also  
13 shown?

14 A. Yes, it is -- oh -- yes, that's right. Well,  
15 that was not restricted to Dr. Engel's poultry house  
16 density necessarily; it was the plaintiff's poultry  
17 house density data layer.

18 Q. I'm sorry. Thank you. Was this figure also  
19 prepared under your direction?

20 A. Yes, it was.

21 MR. GEORGE: Your Honor, I'd move for  
22 introduction of Defendants' Joint Exhibits 2257,  
23 2258, and 2259.

24 THE COURT: Any objections?

25 MR. BULLOCK: I have no objection to 2257

1 and 2258. I do object to 2259, as the caption on  
2 that states this is based upon the calculations of  
3 Billy Clay, and Billy Clay is not before the court  
4 and hasn't presented these matters before this  
5 court.

6 MR. GEORGE: Your Honor, perhaps we could,  
7 without objection, have the first two exhibits  
8 introduced, and then I'll move to lay a further  
9 foundation.

10 THE COURT: Very well. 2257 and 2258 are  
11 admitted.

12 Q. (By Mr. George) Doctor, let's talk about the  
13 first two, then we'll come back to the third  
14 exhibit.

15 Can you look at Exhibit 2257 and explain  
16 what is shown there and how it is relevant to your  
17 analysis of cross-correlations.

18 A. What's shown is the density of poultry houses.  
19 And there are two poultry house densities that are  
20 used based on Doctor Engel's characterization as all  
21 poultry houses on the top figure, and just the  
22 active -- what he identified as what he believed to  
23 be active houses on the bottom figure.

24 Then on the X axis, or the horizontal axis,  
25 we have the septic density. And these are based on

1 the subwatersheds that were studied by Dr. Engel. I  
2 believe there were 14 of them. And he had deleted  
3 from consideration in calculating his regression  
4 statistics a couple of subwatersheds because they  
5 had urban influences in those watersheds.

6 Q. Do you agree that that was appropriate to  
7 delete those subwatersheds?

8 A. Yes, I do. I think it's appropriate to zero in  
9 on the influence of land that's separate from the  
10 urban influence, but I do think it's really  
11 important when you do that to make sure you  
12 communicate that caveat, that the results of the  
13 analyses are purposely excluding whatever impact you  
14 may have in the urban environment. I think it's  
15 appropriate to do that. I would do it the same way,  
16 but I think that if you fail to communicate that  
17 caveat, that's misleading.

18 Q. Doctor, were there any other subwatersheds  
19 that, in your judgment, were impacted by urban land  
20 uses that should have been deleted from the  
21 analysis?

22 A. Yes. There was one other that had -- I think  
23 it was seven percent of land use. It was more than  
24 five percent. So I thought that for the same  
25 reasons as Doctor Engel had deleted the other two,

1 that the third one should be deleted as well.

2 Now, I didn't delete them from the  
3 figures. I showed the data, but I didn't include  
4 them in calculating the regression line.

5 Q. Can you continue to show what -- to describe  
6 what your analysis shows.

7 A. What it shows is a statistically significant  
8 relationship between the density of septic systems  
9 in these small subwatersheds and the poultry house  
10 densities that Dr. Engel estimated for these same  
11 small subwatersheds.

12 Q. I'm a lawyer primarily because I'm not good at  
13 statistics. Can you tell us what it is about this  
14 figure that defines statistical significance.

15 A. It's the P value. And it's -- both of those  
16 plots were P less than 0.01. The main -- the main  
17 standard that's used for evaluating significance on  
18 regressions like this would be if the P value was  
19 less than .05. That's what's called the 95 percent  
20 significance level. That's what people typically  
21 use. So a P of less than .01 is of higher  
22 significance than that.

23 Q. Doctor, based upon the analysis shown in this  
24 exhibit, are the presence of septic tanks in rural  
25 areas where poultry houses are located a confounder

1 in the analysis?

2 A. Yes, because if you're going to try to use a  
3 regression between stream phosphorus and poultry  
4 house density and say from the results of that that  
5 the poultry houses are causing the stream  
6 phosphorus, well, first of all, you can't say that  
7 the significance of the correlation means that those  
8 are causal anyway; but independent of that, the fact  
9 that something else that's a possible source is also  
10 correlated is certainly a confounding factor.

11 Q. Doctor, could you turn to the next tab,  
12 Defendants' Joint Exhibit 2258 which is in  
13 evidence. And could you describe the analysis that  
14 is shown in this figure and how it's relevant to  
15 cross-correlation.

16 A. Yes. This is essentially the same analysis as  
17 the previous figure, except that on the X axis,  
18 we're looking at the density of roads in those  
19 subwatersheds rather than the density of septic  
20 systems. But again, we see the correlation between  
21 poultry house density and, in this case, road  
22 density.

23 Q. Doctor, does the presence of roads in areas  
24 where poultry houses are located constitute a  
25 confounder in the analysis?

1 A. Yes, for the same reason as we discussed with  
2 septic systems.

3 Q. Doctor, I note there's one other statistic on  
4 these figures that we haven't discussed yet, which  
5 is the  $R^2$  value. Do you see that?

6 A. Yes.

7 Q. That's present on both of the exhibits that  
8 we've been discussing?

9 A. Yes.

10 Q. What is the  $R^2$  value, and what does it tell us?

11 A. It tells us what percent of the variation  
12 between the two variables is explained by the  
13 relationship by the regression. So we're on this  
14 Figure 8-6, and if we look at the top, the top  
15 panel, it gives an  $R^2$  of 0.57. That means that 57  
16 percent of the variability in the poultry house  
17 density can be explained by its relationship with  
18 road density.

19 Q. Thank you. Now, Doctor, did you also evaluate  
20 -- let me back up.

21 Based upon your review of cattle  
22 populations in the watershed and your own personal  
23 observations in the watershed, are cattle generally  
24 associated with the rural areas in which poultry  
25 houses are situated?

1 A. That's been my observation, yes.

2 Q. Doctor, as part of your review of the work of  
3 Dr. Stevenson and Dr. Engel, did you investigate the  
4 statistical correlation between where cattle are  
5 located and where poultry houses are located in the  
6 watershed?

7 A. Yes, I did.

8 Q. And as part of that analysis, were you provided  
9 with data from Dr. Clay regarding cattle locations?

10 A. Yes.

11 Q. Doctor, is the -- if you could turn to tab 24  
12 and find Defendants' Joint Exhibit 2259.

13 A. Yes.

14 Q. With respect to the information provided by  
15 Dr. Clay, can you provide us with a description of  
16 that information and how it was assembled for your  
17 use.

18 A. Well, the information would be the cattle  
19 densities from the census of agriculture. And  
20 Dr. Clay aggregated those by ZIP code because that  
21 was a way to give us a number of spatial units  
22 within the overall IRW that we could use to evaluate  
23 relationships between cattle and some other  
24 variable. We did not have cattle estimates by Engel  
25 subwatersheds.

1                   So then the next step would be, well, what  
2 other units of geography can we use to evaluate the  
3 spatial relationship. And the best that we could  
4 come up with to do that was the cattle by ZIP codes.

5 Q. Doctor, when you looked across the watershed at  
6 poultry house density and cattle by ZIP code, did  
7 you find the statistical relationship?

8 A. Yes.

9                   MR. GEORGE: Your Honor, I move for the  
10 introduction of Defendants' Joint Exhibit 2259.

11                  MR. BULLOCK: Judge, even by his own  
12 testimony today, it remains hearsay as to the cattle  
13 density. I don't believe that he can testify as to  
14 cattle densities.

15                  MR. GEORGE: Your Honor, under Rule 703, an  
16 expert is entitled to rely upon hearsay for purposes  
17 of his analysis. We're not offering the underlying  
18 ZIP code statistics by Dr. Clay for the truth of the  
19 matter. We're simply offering them as the basis for  
20 an opinion and an analysis that this expert has  
21 done. I think that's proper.

22                  THE COURT: This is part of his report?

23                  MR. GEORGE: It is, Your Honor.

24                  THE COURT: Rule 703 would permit it not  
25 for the truth of the matter asserted, but as being

1 of a type reasonably relied upon by experts in a  
2 particular field. The Exhibit 2259 is admitted.

3 Q. (By Mr. George) Doctor, we heard testimony, and  
4 I think you reviewed it, by Dr. Engel that his  
5 analysis was based on 14 subwatersheds within the  
6 million-acre watershed. Did you see that?

7 A. Yes.

8 Q. Did you see any analysis in Dr. Engel's work  
9 that would support the extrapolation of his results  
10 for the 14 subwatersheds to the watershed as a  
11 whole?

12 A. No.

13 Q. Doctor, did you also analyze the manner in  
14 which Dr. Engel and Dr. Stevenson counted poultry  
15 houses in their correlations?

16 A. Yes.

17 Q. And what did they do generally?

18 A. Well, they had a database of poultry house  
19 locations that was obtained, it's my understanding,  
20 from aerial photography. And they did some analyses  
21 to try to determine which ones were active and which  
22 ones were not. I have no idea how valid that is,  
23 but that's something they did, and I took it at face  
24 value.

25 But in performing their analyses, their

1 correlations, they also assigned a two-mile buffer  
2 around each of the subwatersheds. So you'd have a  
3 subwatershed for study, and then expand that out two  
4 miles in all directions and create a buffer.

5 And then in calculating the number for the  
6 density of poultry houses, what they did was, for  
7 some analyses, they just did the poultry houses in  
8 the subwatersheds, and I don't have a problem with  
9 that. But for other analyses, they tabulated the  
10 number of poultry houses in the subwatersheds plus  
11 in those two-mile buffers.

12 I can stop there and see where you want to  
13 go from there.

14 Q. Doctor, what is your understanding of the  
15 purpose of these two-mile buffer zones in their  
16 analyses?

17 A. How it was explained was that there's a  
18 possibility that poultry litter is trucked from the  
19 poultry house location to the area it's going to be  
20 spread, and they contend that that area is rather  
21 short, and they identified two miles as what they  
22 believed to be the area from which poultry litter  
23 may be imported into the subwatershed.

24 But they did not account for the fact that  
25 there's an equal possibility or probability that

1 poultry litter from a house inside that subwatershed  
2 could be trucked the same two miles outside. So it  
3 was a very biased analysis.

4 Q. Doctor, what is the impact -- and maybe you got  
5 there just a moment ago. What is the impact of that  
6 accounting method on the reliability of the results?

7 A. My opinion is it renders those results  
8 unreliable, because it's a faulty logic constraint  
9 on the analysis. If there's an equal possibility or  
10 probability of trucking poultry litter in as  
11 trucking poultry litter out, then if you want to  
12 conclude half of that in your analysis, you need to  
13 somehow include consideration of the other half as  
14 well. Otherwise, you're biasing your analysis.

15 Q. Doctor, did you review the impact that these  
16 buffer zones had on the actual poultry house counts  
17 used in the subwatershed analysis?

18 A. Yes, I did.

19 Q. And what was that impact?

20 A. Well, the end result was that the total number  
21 of poultry houses that they counted in their  
22 subwatersheds plus buffers was about the same as the  
23 total number of poultry houses that they estimated  
24 for the entire IRW. That was because they were  
25 double and triple counting poultry houses within

1 those buffers.

2 Q. Now, Doctor, did Dr. Stevenson present any  
3 density regression analysis that did not use these  
4 buffer zones?

5 A. I don't believe so, no.

6 Q. Doctor, based upon all the data and the reports  
7 and studies and testimony that you've reviewed and  
8 the work that you've done in this case, do you agree  
9 with the State's proposition that poultry litter is  
10 responsible for injuring water quality in the  
11 Illinois River Watershed?

12 A. No, I've not seen any indication that that  
13 proposition is proved at all.

14 MR. GEORGE: Thank you, Your Honor, I'll  
15 pass the witness.

16 THE COURT: Cross-examination.

17 MR. BULLOCK: Judge, we asked defendants if  
18 we could interrupt Dr. Sullivan. At this time, we  
19 ask rather than defendants asking, so we could go  
20 ahead and do Mr. Thompson's cross. He has a dental  
21 appointment that he has to make, so we thought we'd  
22 drill him without Novocaine before he gets the  
23 treatment.

24 THE COURT: Very well.

25 MR. GEORGE: Your Honor, the defendants are

1 agreeable to that with one qualification, and  
2 Mr. Bullock and I discussed this. That is,  
3 notwithstanding the interruption, we will complete  
4 the cross-examination and direct of this witness  
5 today so he can leave town.

6 MR. BULLOCK: Yes, sir. Steve Thompson.

7 (Witness sworn.)

8 THE COURT: State your full name for the  
9 record, please, sir.

10 THE WITNESS: Stephen A. Thompson.

11 THE COURT: I understand you have a dentist  
12 appointment; is that correct?

13 THE WITNESS: I do.

14 THE COURT: We'll try to get you out of  
15 here.

16 Mr. Nance.

17 MR. NANCE: We appreciate the accommodation  
18 and appreciate the defendants' accommodation as  
19 well.

20 **STEPHEN A. THOMPSON,**

21 having been first duly sworn, was called as a  
22 witness and testified as follows:

23 **CROSS-EXAMINATION**

24 BY MR. NANCE:

25 Q. Mr. Thompson, are you the director of the

1 Department of Environmental Quality?

2 A. Yes.

3 Q. And are you the same Steve Thompson whose  
4 deposition was played to the court just before  
5 Christmas?

6 A. Yes.

7 Q. In that deposition that was played, you said  
8 you believed that the TMDL process would result in  
9 an unfair allocation of load reductions. Do you  
10 remember that testimony?

11 A. Yes.

12 Q. Let's pursue that in a little greater detail.  
13 Do you anticipate that a completed TMDL on -- in the  
14 IRW in Oklahoma would result in a determination that  
15 phosphorus loadings need to be reduced?

16 A. Yes.

17 Q. And why is that, sir?

18 A. Well, the waterbody is impaired for phosphorus,  
19 so definitionally, you would need -- it would  
20 require reductions.

21 Q. Do you anticipate that a completed TMDL for the  
22 Oklahoma portion of the Illinois River Watershed  
23 would result in required loading reductions for both  
24 point sources and nonpoint sources?

25 A. Yes.

1 Q. Would you tell the court, please, what point  
2 sources exist in the Oklahoma portion of the IRW.

3 A. For the Illinois River, the city of Tahlequah  
4 and the city of Westville, city of Stillwell  
5 discharges to an arm of Lake Tenkiller.

6 Q. Do each of these point sources have Clean Water  
7 Act NPDES permits?

8 A. Yes, they do.

9 Q. Do each of these permits have phosphorus  
10 limits?

11 A. Yes.

12 Q. Would you tell the court what your agency's  
13 authority and responsibility is regarding these  
14 permits to ensure any load reductions that might be  
15 required by a TMDL?

16 A. It's our responsibility to set limits in the  
17 permit to meet the requirements of the TMDL.

18 Q. And if a reduction was required in loading,  
19 would there have to be lower limits in the permits?

20 A. Yes.

21 Q. Would any phosphorus limit reductions be merely  
22 voluntary, or can they be legally required of permit  
23 holders?

24 A. They are legally required.

25 Q. Can you give the court, please, an example of

1 how such a point source load reduction might be  
2 achieved in order to comply with the TMDL?

3 A. Well, there's probably three basic ways that  
4 that would be done: An addition to the current  
5 treatment, a change in the treatment, change in  
6 technology. In extreme cases, taking the discharge  
7 out of the watershed.

8 Q. Would either of these alternatives be expensive  
9 for the municipalities involved?

10 A. Yes.

11 Q. Can permit holders avoid a required permit  
12 reduction if that reduction is too expensive?

13 A. No.

14 Q. Is there any agency of the state of Oklahoma  
15 that provides loans to municipalities needing to  
16 meet permit requirements?

17 A. Yes, the Oklahoma Water Resources Board.

18 Q. Now, what is the DEQ's authority and  
19 responsibility regarding -- we'll focus on  
20 poultry -- regarding reducing poultry litter-based  
21 nonpoint source phosphorus loadings to ensure load  
22 reductions required by a TMDL?

23 A. Well, we have no authority. We can make  
24 recommendations in the TMDL, but we have no  
25 authority to make those reductions.

1 Q. And why is that, sir?

2 A. Because the -- those provisions of the Clean  
3 Water Act have been assigned to the Oklahoma  
4 Department of Agriculture.

5 Q. Does the Clean Water Act itself give the State  
6 any additional authority other than in state law to  
7 reduce nonpoint source pollution?

8 A. No.

9 Q. If you can't require a nonpoint source load  
10 reduction under a TMDL, what can be done?

11 A. Well, you can make recommendations and you can  
12 implement Best Management Practices.

13 Q. To your knowledge, does any agency of the  
14 Oklahoma government have the legal authority to  
15 enforce an agricultural nonpoint source load  
16 reduction that might be required in a TMDL for the  
17 Oklahoma part of the watershed?

18 A. If that does exist, it exists with the  
19 Department of Agriculture.

20 Q. Do you know specifically what their authority  
21 might be?

22 A. No.

23 Q. You indicated in your deposition testimony that  
24 was played before Christmas that you believe the  
25 process, as presently constituted, is unfair or

1 inequitable. Would you tell the court why that is,  
2 please.

3 A. I think there are two reasons. The current  
4 process tends to ignore higher levels of loading on  
5 both sides. And by cutting out those higher levels  
6 of loading, I believe it skews --

7 THE COURT: What do you mean by both sides,  
8 on both sides?

9 THE WITNESS: It cuts out for both -- those  
10 for low flow and high flow. High flow generally  
11 attributed to nonpoint source. Low flow attributed  
12 to point source. It cuts out, as anomalous, the  
13 higher readings.

14 Because point sources are taken -- are  
15 constant in their discharge, the anomalies are not  
16 as great for point sources as they are for nonpoint  
17 sources. So we believe that it skews the process in  
18 favor of nonpoint source.

19 The second issue is that there is no  
20 specific number of samples that are required on  
21 either side. There are some general requirements,  
22 but no specific requirements. And the DEQ believes  
23 until there's some specificity brought to that  
24 issue, that it will continue to be skewed in favor  
25 of nonpoint sources.

1                   THE COURT: Would you see if you can  
2 clarify that a little bit.

3                   MR. NANCE: Okay. I will.

4 Q. (By Mr. Nance) In the sampling protocol --  
5 first of all, is the sampling protocol something  
6 that your agency does, or does some other agency  
7 determine that?

8 A. Most of the sampling is done by either the  
9 Oklahoma Water Resources Board or the Conservation  
10 Commission. The DEQ does very limited sampling.

11 Q. But the protocols about how the sampling is  
12 done, who is responsible for that?

13 A. The protocol is the responsibility of the  
14 Oklahoma Water Resources Board.

15 Q. In that protocol, and I'm talking about the  
16 Illinois River Watershed here, a scenic river and an  
17 impaired waterbody, does the protocol call for a  
18 certain number of high-flow-samples if you can get  
19 them?

20 A. Yes.

21 Q. Does it set any number of low flow or  
22 base-flow-samples that need to be taken?

23 A. No.

24 Q. As a result in that, are there more  
25 base-flow-samples or high-flow-samples that are

1 taken?

2 A. Generally, there are more base-flow-samples  
3 taken.

4 Q. And is this -- as the standard works out, is it  
5 some sort of a rolling average of all of those  
6 samples, monthly rolling average?

7 A. Yes.

8 Q. As a result of having more low-flow-samples  
9 taken and this rolling average, does that tend to  
10 weight more heavily for high-flow-samples or  
11 low-flow-samples?

12 A. Low-flow-samples.

13 Q. Now, as we study the watershed, have we  
14 determined or has -- are you aware of whether or not  
15 most of the phosphorus loading occurs during  
16 high-flow-times or low-flow-times?

17 A. Most of the phosphorus loading occurs during  
18 high-flow-times.

19 Q. So if the sampling regime just works in favor  
20 of low-flow-times , does that mean that we're just  
21 not capturing for that purpose a lot of the  
22 high-flow-loading?

23 A. Yes.

24 MR. NANCE: Your Honor, does that meet your  
25 need?

1                   THE COURT: Well, I see now where he's  
2 coming from. Go ahead.

3 Q. (By Mr. Nance) Now, if just the way the  
4 sampling is done and if a TMDL were completed, would  
5 that mean that point sources that are included in  
6 that TMDL would incur an unfairly expensive  
7 requirement to meet a TMDL load reduction?

8 A. Yes.

9 Q. What steps, if any, have you taken to try to  
10 resolve this unfair situation?

11 A. I asked our retired water quality division  
12 director Jon Craig to work with the water board to  
13 resolve the issue.

14 Q. And has it been resolved, to your knowledge, at  
15 this point?

16 A. No.

17 Q. In your deposition that was played before  
18 Christmas, you said that a TMDL was the best way we  
19 have to manage multiple sources in a watershed to  
20 achieve a water quality objective. Do you remember  
21 that testimony?

22 A. Yes.

23 Q. Based upon your years in the environmental  
24 protection business in this state, does the Oklahoma  
25 portion of the IRW receive phosphorus loading that

1 originates in the state of Arkansas?

2 A. Yes.

3 Q. To your knowledge, does any agency of the state  
4 of Oklahoma have the authority to enforce TMDL  
5 restrictions for that Arkansas-based loading?

6 A. No.

7 Q. Do you know to what extent any agency of the  
8 state of Arkansas has legal authority to enforce  
9 nonpoint source loading for its side of the  
10 watershed?

11 A. No.

12 MR. NANCE: Nothing further, Your Honor.

13 THE COURT: When did you ask Jon Craig to  
14 work with the water board to resolve this issue?

15 THE WITNESS: I don't know the exact date,  
16 but it's probably been a couple of years ago.

17 THE COURT: How many years?

18 THE WITNESS: Two.

19 THE COURT: So 2007 or 2008?

20 THE WITNESS: I would say 2007.

21 THE COURT: Do you know whether Jon Craig  
22 has done anything to attempt to resolve the issue?

23 THE WITNESS: He reported to me that he  
24 continues to work with the Oklahoma Water Resources  
25 Board to resolve the issue.

1 THE COURT: Cross-examination -- or  
2 redirect, rather.

3 **REDIRECT EXAMINATION**

4 BY MR. MCDANIEL:

5 Q. Good morning, Mr. Thompson. How are you?

6 A. Good morning.

7 Q. I appreciate you working with us on the  
8 schedule so we can try to get this done.

9 Mr. Thompson, let me follow up on several  
10 things Mr. Nance asked you. And in particular, I  
11 want to follow up on this status of the Oklahoma  
12 TMDL. You said that Mr. Craig is retired.

13 A. Yes, he retired at the end of the year.

14 Q. 2009?

15 A. Yes.

16 Q. Okay. So if he's retired, who now has that  
17 mantle for ODEQ to carry your message to the water  
18 board?

19 A. Our new water quality division director is  
20 Shelly Chard, C-H-A-R-D, hyphen, McClary,  
21 M-C-C-L-A-R-Y.

22 Q. Have you had a conversation with her, sir,  
23 about the issues you've discussed with us with  
24 regard to the TMDL?

25 A. Yes.

1 Q. And do you and she have an action plan?

2 A. I -- she is relatively new in her job, but her  
3 action plan would be to continue the effort that  
4 Mr. Craig had to work with the Water Resources  
5 Board.

6 Q. As part of your role as director of the  
7 Oklahoma Department of Environmental Quality, do you  
8 have a direct conduit of communication with the  
9 director of the Water Resources Board?

10 A. Yes.

11 Q. And is that Mr. Smith?

12 A. Yes.

13 Q. Duane Smith. Have you and Mr. Smith discussed  
14 these issues you have with the protocols for the  
15 Scenic River criteria?

16 A. I don't recall that conversation, no.

17 Q. Is there a particular reason the two of you  
18 have not spoken about this?

19 A. Well, this was an issue that was worked out in  
20 a technical work group that included other agencies,  
21 so that's the reason.

22 Q. Is there anything prohibiting you from speaking  
23 directly with Mr. Smith to try to get this resolved?

24 A. No.

25 Q. If I understand -- let me back up before I

1 change gears here. Is it your intention to speak to  
2 Mr. Smith to get this resolved?

3 A. It may become necessary, yes.

4 Q. What would precipitate, in your view, it  
5 becoming necessary, if it's not necessary today?

6 A. I think Ms. McClary should continue to work  
7 with the staff of the water board to resolve the  
8 issues, and if that doesn't occur at some point,  
9 well, then, I would speak with Duane.

10 Q. If I understand where we are, sir, the status  
11 of this issue really hasn't changed since you and I  
12 spoke at your deposition in April?

13 A. That's correct.

14 Q. April of 2009. At the time we spoke at your  
15 deposition, you had not established a time period by  
16 which this needs to be resolved. Have you now, sir?

17 A. No.

18 Q. Your -- I appreciate your explanation of why  
19 you think the current formulation would not provide  
20 for an equitable treatment between point and  
21 nonpoint sources.

22 Let me make sure I understand what the  
23 source of the specific requirements are that are  
24 causing you the problem. And so tell me if I'm  
25 correct in this, sir, that, first off, this relates

1 to the Scenic Rivers criterion of 0.037 milligrams  
2 per liter of phosphorus?

3 A. No, it does not.

4 Q. Tell me where the protocols reside that are  
5 causing you the problem.

6 A. They are in the implementation plan for  
7 development of TMDLs, the sampling protocols that  
8 are within the -- the responsibility of the Oklahoma  
9 Water Resources Board.

10 Q. This set of protocols, is it specific to the  
11 waters of the Illinois River Watershed, or is this a  
12 statewide protocol?

13 A. It is a statewide protocol.

14 Q. Is it within the power -- to your knowledge, is  
15 it within the power of the Water Resources Board to  
16 adjust those protocols?

17 A. Yes.

18 Q. Is it within the power of the Water Resources  
19 Board to adjust those protocols to adapt to the  
20 circumstances present in the Illinois River  
21 Watershed?

22 A. Yes.

23 Q. Would the Water Resources Board need to do that  
24 through a rule-making process?

25 A. I'm not sure.

1 Q. They have it within their statutory power to do  
2 it. We wouldn't need legislation, I guess is the  
3 question.

4 A. We would not need legislation, that's correct.

5 Q. If they made the decision -- if the water board  
6 agreed that adjustments needed to be made, and  
7 agreed with your view, given your experience in  
8 Oklahoma government, about how long would it take to  
9 effect a change in those protocols?

10 A. This resides within a implementation plan. And  
11 whether that -- a change in that implementation plan  
12 would need to go through the rule-making process, I  
13 don't know.

14 Q. I'm trying to make sure I understand the  
15 testimony you gave with regard to sampling. Your  
16 concern is that you think the implementation plan  
17 should required a minimum number of  
18 high-flow-samples within the average?

19 A. We think -- I think -- we believe that there  
20 should be a specific number of samples for both high  
21 flow and low flow. We also believe that once the  
22 data is captured, it should be considered.

23 Q. Explain that last statement, sir. I don't  
24 understand that.

25 A. If you capture data at high flow or low flow,

1 the current protocol cuts out what they believe to  
2 be anomalies. We believe that it should consider  
3 all of that data.

4 Q. If I think -- I think I understand what you  
5 just said, sir. Is that because the standard is  
6 based upon a geometric mean of the data where you  
7 take out the highest and lowest values?

8 A. Yes.

9 Q. I just want to make sure we're clear and -- the  
10 geometric mean is an element of the Scenic Rivers  
11 standard, right, 30-day geometric mean?

12 A. I'm not sure of that.

13 Q. All right. So you think all data should go  
14 into that rolling average?

15 A. Sure. Yes.

16 Q. Do you -- are you aware, sir, of what the Water  
17 Resources Board opinion is about that?

18 A. They believe that they should use the geometric  
19 mean.

20 Q. Do you know, sir -- do you have any experience  
21 or knowledge whether water quality standards in  
22 other states typically use the geometric mean  
23 approach or whether they use just the raw average,  
24 as you suggest?

25 MR. NANCE: Object as beyond the scope of

1 cross.

2 THE COURT: Overruled.

3 THE WITNESS: No.

4 Q. (By Mr. McDaniel) You're just not aware?

5 A. I'm not aware, no.

6 Q. Has there someone from your technical staff  
7 given you their technical viewpoint that this  
8 geometric mean is not an appropriate methodology?

9 A. Yes.

10 Q. Who is that, sir?

11 A. Jon Craig.

12 Q. If the Water Resources Board does not respond,  
13 what course of action do you have?

14 A. Well, we have continued to do TMDLs. We have  
15 500 or more of those to do. We are concentrating on  
16 watersheds that do not have point sources or where  
17 there is a need by a community to have a TMDL done.

18 So it is really a matter of priority in  
19 order to meet -- in order to try to work through  
20 this issue.

21 We will continue to do TMDLs as required by  
22 federal law.

23 Q. Well, my question specifically, sir, was  
24 addressing the issue with the Illinois River  
25 Watershed. First let me ask this: How does the

1 Illinois River Watershed rank in the list of  
2 priorities for TMDLs?

3 A. It would be a high priority if we could work  
4 through this issue.

5 Q. Okay. Returning to my prior question. If the  
6 Water Resources Board does not respond and engage  
7 you or your staff in the discussion of these  
8 concerns, what options under law do you have?

9 A. We have the -- we have no option but to do a  
10 TMDL.

11 Q. According to the standards as written?

12 A. Yes.

13 Q. If you are engaged by the Water Resources Board  
14 in a technical discussion of these different  
15 viewpoints and you simply cannot agree, or the Water  
16 Resources Board does not agree, are your positions  
17 the same, that being you must proceed by law to  
18 generate the TMDL?

19 A. Yes.

20 Q. Sir, how will we know when we are at that point  
21 where you recognize that you are at an impasse and  
22 that you have no other choice but to comply with law  
23 and release this project for completion?

24 A. Well, we will continue -- I've asked  
25 Ms. McClary -- Chard-McClary to work with the water

1 board. At some point when we are told -- it's my  
2 understanding they've continued to evaluate it and  
3 have not made that decision.

4 If at the point the water board makes the  
5 decision that they're not going to change it, that's  
6 when we would do so.

7 Q. Okay, sir. And my specific question is, we're  
8 in a court of law, we have the judge on the bench  
9 who's a decision maker, and I think it's important  
10 to know, sir, can you tell this court, give this  
11 court a time frame or a date by which this will  
12 either be resolved between your two agencies or not,  
13 meaning that you will then have to proceed to  
14 develop the TMDL as required by law?

15 A. It would depend upon the water board making a  
16 final decision that they are not going to change.

17 Q. I don't want to argue with you, sir. Do you  
18 understand my question? How long will this go on  
19 until you recognize it's not going anywhere with the  
20 water board and you're going to have to issue the  
21 order to your staff to develop the TMDL?

22 MR. NANCE: I object as asked and answered,  
23 Your Honor.

24 THE COURT: Overruled.

25 THE WITNESS: I -- we will continue to work

1 with the water board to establish a change. At the  
2 point where the water board decides that they are  
3 not going to change, definitively they are not going  
4 to change -- it's not my understanding that that has  
5 occurred -- but at the point when they make that  
6 decision, we will have no choice but to go forward.

7 Q. (By Mr. McDaniel) All right. Out of respect  
8 for you and your position, sir, I'm not going to  
9 argue with you further. But you can't give the  
10 court a date, can you?

11 A. Well, I can tell you that we are going to  
12 pursue it. I can tell you that we will continue to  
13 try to work through the technical issues. I can't  
14 tell you when the water board will definitively make  
15 that decision.

16 Q. All right.

17 THE COURT: A couple of questions here.  
18 Down to brass tacks here. In terms of point source,  
19 because you contend that requiring the geometric  
20 mean unfairly points to point sources, which of  
21 these wastewater treatment plants do you suspect  
22 would require these expensive upgrades or changes in  
23 the event that the sampling regime or protocol is  
24 not changed? Tahlequah?

25 THE WITNESS: Tahlequah and Westville.

1                   THE COURT: Westville. Those two  
2 primarily?

3                   THE WITNESS: Yes.

4                   THE COURT: Now, you also said, both in  
5 your deposition and here today, that you're  
6 concentrating -- you're doing TMDLs on watersheds  
7 that do not have point sources, correct?

8                   THE WITNESS: That's correct.

9                   THE COURT: All right. But you also said  
10 you're doing TMDLs "where there is a need by a  
11 community to have a TMDL done." So that would  
12 suggest to me that in some cases, you are doing  
13 TMDLs where there are point sources; is that  
14 correct?

15                  THE WITNESS: That is correct.

16                  THE COURT: All right. How are you  
17 distinguishing, then, between those watersheds on  
18 which there are point source discharges where you've  
19 decided to ignore this problem that you have with  
20 the geometric mean and you're doing the TMDLs, and  
21 those watersheds where you've made, as you say, the  
22 policy decision yourself?

23                  And to your credit, in your deposition,  
24 you've taken the responsibility here. How are you  
25 distinguishing? Because I have in my hand the TMDL

1 that you recently did on Spavinaw. And Spavinaw, as  
2 you point on page 14 of that TMDL, city of Decatur  
3 is a point source discharge.

4 So just within the last few months, you did  
5 a final TMDL on Lakes Eucha and Spavinaw; is that  
6 correct?

7 THE WITNESS: That's correct.

8 THE COURT: So how are you distinguishing  
9 between those TMDLs where you've decided to ignore  
10 your problem with geometric mean and those  
11 watersheds in which you've held up on the TMDL?

12 THE WITNESS: If I could give a couple of  
13 examples.

14 THE COURT: Please.

15 THE WITNESS: We are currently engaged in a  
16 TMDL on the North Canadian River in Oklahoma City.  
17 That waterbody is --

18 THE COURT: It's the Oklahoma River now,  
19 right?

20 THE WITNESS: I'm sorry, the Oklahoma  
21 River, that's correct. Old habits die hard, I  
22 suppose.

23 THE COURT: I'm the same way. Go ahead.

24 THE WITNESS: That waterbody is impaired  
25 for bacteria. And as you may recall, last summer

1 there was an event in Oklahoma City in which people  
2 got in the river and became ill as a result of that.

3 THE COURT: That was the --

4 THE WITNESS: Triathlon.

5 There is an interest, an overriding  
6 interest by the City of Oklahoma City to address  
7 bacteria in the Oklahoma River.

8 My staff has been asked to discuss with the  
9 cities like that what we believe is an unfair --  
10 this unfair issue. But the desire by the City was  
11 so overriding in that particular case that they were  
12 willing to have us go forward with the TMDL in spite  
13 of what we believed was an unfair -- an unfair issue  
14 with point sources.

15 There are times when, because of growth or  
16 because of new industries or because of some other  
17 issue, that a City must increase its load and we  
18 must do a TMDL on an impaired stream so that we can  
19 -- so that they can treat -- take care of either  
20 growth or industries coming into that community.

21 In those cases, we have gone forward with  
22 the TMDL process, again, because of -- in spite of  
23 our warning to these cities, there's an interest in  
24 those cities or, in some cases, with industries to  
25 go forward.

1           In the case of Eucha-Spavinaw, there was --  
2 I believe there was a statutory requirement. There  
3 was -- the City of Tulsa went to the legislature and  
4 asked that this TMDL process be done so that they  
5 could address the impairments in that particular  
6 watershed.

7           In all honesty, Your Honor, I don't  
8 remember whether that legislation passed or not, but  
9 there was clearly interest on the part of the City  
10 of Tulsa to do a TMDL for that -- for those  
11 purposes. And so in spite of these -- what we  
12 considered to be unfair treatment to those  
13 communities, they decided that there was an  
14 overriding policy issue important to them to go  
15 forward with it, and so we decided to go forward.

16           THE COURT: Mr. McDaniel.

17 Q. (By Mr. McDaniel) Mr. Thompson, I know you  
18 weren't necessarily involved in filing this lawsuit,  
19 but would you agree, sir, that this lawsuit  
20 indicates the State of Oklahoma is interested in the  
21 Illinois River Watershed?

22 A. Yes.

23 Q. Can you tell me, sir, how the initiative that  
24 the EPA has started this fall is affecting, if at  
25 all, your decisions with regard to promulgating the

1 Oklahoma TMDL?

2 MR. NANCE: Object as beyond the scope of  
3 cross.

4 THE COURT: Overruled.

5 Q. (By Mr. McDaniel) Did you understand my  
6 question?

7 A. No, I don't understand.

8 Q. I realize from your expression, I may have  
9 asked a poor question. Are you aware that EPA has  
10 engaged the process with both Oklahoma and Arkansas  
11 to develop a two-state TMDL?

12 A. Yes.

13 Q. How is that relevant, if at all, to the  
14 decisions you are pondering with regard to any TMDL  
15 for the Oklahoma side?

16 A. Well, it is an artifact, but the policy extends  
17 statewide. And so we view this as a statewide  
18 policy, as a statewide issue to try to solve this  
19 problem. So it is -- I don't know exactly how to  
20 answer your question, honestly. It is in our mind,  
21 but the policy relates not to just phosphorus, to  
22 all criteria where there's an impact from nonpoint  
23 sources. So it's a broader issue for us than just  
24 the Illinois River.

25 Q. Even if you agree with the water board on a

1 change in the implementation plan, the Scenic River  
2 criteria still requires a geometric mean. How are  
3 you going to address that?

4 A. I don't know.

5 Q. That's statutory, isn't it?

6 A. I don't know that.

7 MR. MCDANIEL: May I approach, Your Honor?

8 THE COURT: You may.

9 Q. (By Mr. McDaniel) Mr. Thompson, I've handed  
10 you what's been admitted into evidence as  
11 Defendants' Joint Exhibit 8090.

12 A. Uh-huh.

13 Q. I assume you received a copy of the letter  
14 dated October 1, 2009 from Miguel Flores, acting  
15 deputy regional administrator of EPA Region 6 that  
16 was addressed to Teresa Marks at Arkansas Department  
17 of Environmental Quality and J.D. Strong at the  
18 Oklahoma Secretary of Environment's office?

19 A. Yes.

20 Q. Can you tell me how and when you received a  
21 copy of this?

22 A. Not specifically. It wasn't addressed -- I  
23 wasn't copied on the letter.

24 Q. I notice Mr. Jon Craig at the Oklahoma  
25 Department of Environmental Quality was copied. Did

1 he provide you materials?

2 A. I suspect it was either Mr. Craig or  
3 Mr. Strong.

4 Q. This letter says on its face -- it's got a date  
5 stamped on it, October 1, 2009. Do you recall when  
6 you received a copy of this?

7 A. Not specifically.

8 Q. Before the time you had this letter in hand,  
9 were you aware that Region 6 was moving in this  
10 direction?

11 A. Yes.

12 Q. So this -- the information in this letter  
13 itself wasn't a surprise to you?

14 A. No.

15 Q. Now, for how long have you had an understanding  
16 that EPA Region 6 was going to work on this  
17 two-state effort?

18 A. Oh, I -- probably not more than a couple of  
19 months before the letter.

20 Q. Let's look at the very first sentence in the  
21 letter. It says, "Over the past several months, our  
22 agencies have focused considerable attention on  
23 nutrient concerns in the Illinois River Watershed in  
24 northeast Oklahoma and northwest Arkansas."

25 Sir, is ODEQ included within that

1 description? Has ODEQ been focusing considerable  
2 attention on nutrient issues in the Illinois River  
3 Watershed?

4 A. On point sources, yes.

5 Q. All right. The second paragraph, the first  
6 sentence, Mr. Flores states, "As we have recently  
7 been discussing, over the next 12 to 18 months, EPA  
8 will develop a scientifically robust model of the  
9 Illinois River Watershed, incorporating all relevant  
10 segments and nutrient sources in both Arkansas and  
11 Oklahoma."

12 Is this consistent, sir, with your  
13 understanding of EPA's plans to issue a two-state  
14 total maximum daily load within 12 to 18 months?

15 A. Yes.

16 Q. And is it your understanding, sir, that EPA's  
17 intention is that this TMDL will address all  
18 nutrient sources in Arkansas and Oklahoma, both  
19 point and nonpoint?

20 A. Yes.

21 Q. All right. Let's continue in that paragraph.  
22 He says, "EPA's purpose in this effort is to provide  
23 a technically sound basis upon which regulatory and  
24 nonregulatory decisions can be confidently based,  
25 decisions which will lead to reductions of nutrients

1 from both point and nonpoint sources of nutrients in  
2 the watershed."

3 Sir, do you agree that EPA's desire for the  
4 outcome of this TMDL is a technically sound basis  
5 for making regulatory and nonregulatory decisions to  
6 address the reduction of nutrients from both point  
7 and nonpoint sources in the watershed?

8 A. Well, I can tell you that that's what the  
9 letter states, yes.

10 Q. Okay. Do you have -- do you have a belief that  
11 EPA's intention is different than stated here, sir?

12 A. Well, not their intention, no.

13 Q. All right. Now, in the third paragraph at the  
14 bottom, there's mention here that Oklahoma is  
15 requested to name a technical liaison for the TMDL  
16 project.

17 A. Yes.

18 Q. Who has Oklahoma designated for that purpose?

19 A. Well, at the beginning of this, it was Jon  
20 Craig. It will now be Shelly McClary.

21 Q. Now, what will her duties and assignments be  
22 through the course of this project with relationship  
23 to this project?

24 A. She will coordinate with the Environmental  
25 Protection Agency in the state of Arkansas. She

1 will provide information. And she will assess the  
2 technical basis on which the model and the process  
3 will proceed.

4 Q. As far as Oklahoma's comments, feedback, will  
5 she be the conduit into the EPA process for -- let  
6 me put it this way. Will she be Oklahoma's voice at  
7 the table in this process?

8 A. Yes.

9 Q. Turn to the second page of the letter, please,  
10 sir. Let me read a little bit from this top  
11 paragraph. Mr. Flores says, "We expect this  
12 modeling effort may lead to the development of one  
13 or more Total Maximum Daily Loads for the Illinois  
14 basin. EPA will take the lead in developing such  
15 TMDLs, and we encourage active participation by both  
16 Oklahoma and Arkansas. Along with the modeling  
17 work, we are now initiating other factors that may  
18 influence future TMDL decisions for the basin."

19 Sir, do you know what Mr. Flores is  
20 referring to when he says, "other factors that may  
21 influence future TMDL decisions for the basin"?

22 A. Not specifically, no.

23 Q. Well, if you look in that -- continuing in the  
24 paragraph, he makes reference here to a  
25 reevaluation -- excuse me, "Oklahoma's reevaluation

1 of the phosphorus criteria for Scenic Rivers  
2 pursuant to the 2003 statement of joint principles  
3 and actions." Do you see that?

4 A. Yes.

5 Q. Do you believe that may be one of the factors  
6 Mr. Flores is referring to?

7 A. It may be.

8 Q. Sir, to your knowledge, did Oklahoma commit in  
9 the 2003 statement of joint principles to reevaluate  
10 the 0.37 Scenic River phosphorus standard by 2012?

11 A. Yes.

12 Q. If I understand the dialogue that we had at  
13 your deposition and that we've had this morning  
14 before the court, your desire that the criteria or  
15 implementation criteria be reevaluated is something  
16 that could be addressed as part of reevaluating the  
17 Scenic Rivers standard; do you agree? Particularly  
18 the geometric mean and the number of samples.

19 A. It could be, yes.

20 Q. Sir, to your knowledge, does the State of  
21 Oklahoma intend to fulfill this commitment by  
22 reevaluating the Scenic Rivers standard?

23 A. It does not fall within my jurisdiction, but to  
24 the best of my knowledge, it does, yes.

25 Q. Tell me, if you can, sir, what you know about

1 the timing for reevaluating the Scenic Rivers  
2 standard.

3 A. I don't know anything about it.

4 Q. Sir, do you know whether the Oklahoma Water  
5 Resources Board is now accepting comments with  
6 regard to its triennial review of Oklahoma water  
7 quality standards?

8 A. I don't know that specifically.

9 Q. Does ODEQ have any role in that process?

10 A. Well, we, as with any state agency, will have  
11 comments on the process.

12 Q. Is it normal for your office to remain apprised  
13 of what's going on in the Water Resources Board with  
14 regard to water quality standards?

15 A. Yes.

16 Q. But you don't know if OWRB is in the midst of  
17 its triennial review as we speak?

18 A. I know there's been some discussion of it, but  
19 whether they are in the midst of it, I don't know.

20 Q. Sir, do you know whether the Water Resources  
21 Board has included the 0.37 milligram per liter  
22 scenic river standard among the standards it intends  
23 to review during this triennial review?

24 A. No.

25 Q. Now, with regard to the EPA initiative, sir,

1 were you aware that EPA convened a meeting on  
2 November 20, 2009 in Dallas to discuss the project?

3 A. Yes.

4 Q. And who was present for the State of Oklahoma?

5 A. Jon Craig was present, Mark Derichsweiler was  
6 present.

7 Q. You've already told us who Jon Craig is. Who  
8 is Mark Derichsweiler?

9 A. He is a program manager in the water quality  
10 division.

11 Q. And I've had the pleasure of meeting  
12 Mr. Derichsweiler and actually deposing him three  
13 times in this case. Part of his job in his  
14 division, sir, is the TMDL work; is that right?

15 A. Yes, that's correct.

16 Q. So when Oklahoma issues contracts and receives  
17 work product relative to TMDLs, that is  
18 Mr. Derichsweiler's department?

19 A. That's correct.

20 Q. He's certainly knowledgeable on TMDLs?

21 A. Yes.

22 Q. Okay. To your knowledge, were representatives  
23 of the state of Arkansas also at this meeting in  
24 Dallas?

25 A. They were.

1 Q. Tell me, sir, what were the objectives of the  
2 meeting?

3 A. It's my understanding --

4 MR. NANCE: Your Honor, we have gone well  
5 beyond the scope of cross at this point.

6 THE COURT: I understand. Your response.

7 MR. MCDANIEL: Well, Your Honor, there's  
8 really two aspects of this that Mr. Nance has opened  
9 the door to. Number one is the whole question of  
10 TMDL and what is going to be the future with TMDL in  
11 the IRW is very much what we've been talking about.

12 Number two, Mr. Nance made the point with  
13 Mr. Thompson that essentially the State of Oklahoma  
14 and the agencies such as ODEQ and ODAFF had no power  
15 to have an effect on what is going on in Arkansas.  
16 What's going on with the EPA is very much relevant  
17 to that, and I think the court would be well served  
18 by being informed on the process.

19 THE COURT: I think the door has been  
20 opened to this subject. It's central to this  
21 dispute. Overruled. Go ahead.

22 MR. MCDANIEL: Thank you.

23 Q. (By Mr. McDaniel) Do you recall the question  
24 that was pending, sir?

25 A. I don't.

1 Q. The question was: Tell us what you can about  
2 the purposes of the meeting in Dallas.

3 A. It was, to the best of my knowledge, an  
4 organizational meeting. It was a meeting in which  
5 all the parties got together. They discussed the  
6 processes -- or at least the models. There was some  
7 discussion of schedule, things of that nature.

8 Q. Kind of a kickoff meeting?

9 A. Kind of a kickoff meeting.

10 Q. Good enough. Now, did Mr. Craig or  
11 Mr. Derichsweiler bring back to you and provide you  
12 a copy of the official meeting notes?

13 A. Yes.

14 MR. MCDANIEL: May I approach, Your Honor?

15 THE COURT: You may.

16 Q. (By Mr. McDaniel) Mr. Thompson, I've handed  
17 you what's marked for identification as Defendants'  
18 8125. Do you recognize this as the attendance  
19 roster and the meeting notes issued by EPA from the  
20 meeting in November, 2009?

21 A. Yes.

22 Q. Were -- to your knowledge, were these notes  
23 provided to all attendees of EPA?

24 A. To my knowledge.

25 MR. MCDANIEL: Your Honor, this document,

1 this Exhibit 8125 was not listed on the pretrial  
2 order clearly because it didn't exist at the time  
3 the pretrial order was prepared. Defendants do  
4 offer 8125 for admission. We think in the interest  
5 of justice, it is justified, given how central to  
6 the issues in this case this information is, and the  
7 fact that defendants obviously couldn't list it by  
8 the pretrial deadline.

9                   And secondly, Your Honor, offering this --  
10 or accepting this into evidence is not going to  
11 prejudice the State. The State was present at the  
12 meeting and, in fact, knew about it before we did.

13                  THE COURT: Well, is there anything about  
14 this particular document that does more than simply  
15 reflect Mr. Craig's and Mr. Derichsweiler's  
16 attendance at the meeting?

17                  MR. MCDANIEL: Yes, sir, it reflects the  
18 intentions -- it reflects EPA's plan that I think we  
19 have not been able -- up to this point been able to  
20 provide to the court much detail about EPA's  
21 intended course of action. And I think --

22                  THE COURT: Well, the letter file-stamped  
23 October 1 has been admitted into evidence here,  
24 correct?

25                  MR. MCDANIEL: That is correct.

1                   THE COURT: Does this document do anything  
2 further?

3                   MR. MCDANIEL: Well, it does, Your Honor.  
4 It speaks in terms of models that are going to be  
5 considered, contractor that's been retained, data  
6 that is going to be collected, information about  
7 stakeholder meetings that are anticipated, roles  
8 that each of the states will play in the process.

9                   And just so the court can understand where  
10 I'm going here, after I ask a few questions about  
11 this, there was a PowerPoint presentation provided  
12 at the meeting, and my expectation is to want to  
13 offer that to the court, which also includes a  
14 detailed time line for the work project.

15                  THE COURT: Any objection?

16                  MR. NANCE: Your Honor, it is hearsay, and  
17 there's no foundation with this witness because he  
18 did not attend the meeting.

19                  THE COURT: Sustained. I do note, however,  
20 that apparently the EPA agrees with the court that  
21 the Cherokee tribe has potential interest here.

22                  MR. MCDANIEL: Your Honor, I --  
23 alternatively, as far as authentication and  
24 identification, this was -- through the testimony of  
25 Mr. Thompson, this was brought back to him by the

1 attendees at the meeting. There's not much question  
2 about the apparent reliability that it is what it  
3 purports to be.

4 And with regard to the hearsay question,  
5 Your Honor, I think the court could accept this not  
6 for the truth of the matter asserted but for,  
7 rather, its relevance, because the EPA has explained  
8 to Oklahoma its view of what needs to be done, what  
9 will be done and what its planned time frame is and  
10 what it expects from the State of Oklahoma. So as a  
11 matter of notice, I think the court could receive it  
12 for that purpose.

13 MR. NANCE: All of that is for the truth.

14 THE COURT: I think so. Mr. Nance is  
15 correct. Sustained.

16 MR. MCDANIEL: All right.

17 Q. (By Mr. McDaniel) The -- Mr. Thompson, do you  
18 know, sir, that EPA has determined and, in fact,  
19 hired the contractor who will be doing the work?

20 A. I do not.

21 Q. You don't know whether that's occurred or not?

22 A. I do not.

23 Q. The -- do you know that EPA has narrowed the  
24 models that it will consider for use in the project?

25 A. I do not.

1 Q. You do know this is about developing a model?

2 A. Yes.

3 Q. All right. You are aware, sir, that in the  
4 course of this litigation that Dr. Bernard Engel was  
5 working for the State's counsel, purported to model  
6 the Illinois River Watershed using a combination of  
7 GLEAMS field scale model coupled with a routing  
8 equation, are you aware of that?

9 MR. NANCE: I object, we're beyond the  
10 scope.

11 THE COURT: Sustained.

12 MR. MCDANIEL: Your Honor, it relates to  
13 the EPA modeling, if I might.

14 THE COURT: Sustained.

15 Q. (By Mr. McDaniel) Sir, have you received any  
16 notice from Mr. Craig or Mr. Derichsweiler that the  
17 work that was performed with the GLEAMS model by  
18 Dr. Engel will be any component of the work  
19 performed by the EPA?

20 MR. NANCE: Again, beyond the scope.

21 THE COURT: Sustained.

22 Q. (By Mr. McDaniel) Mr. Thompson, what's ODEQ's  
23 role going to be in gathering information for this  
24 project?

25 A. Well, we will -- there's substantial data that

1 is -- has been collected by federal agencies, the --  
2 by the Oklahoma Water Resources Board, by the  
3 Conservation Commission and other sources.

4 Our role will be, as far as providing data,  
5 to provide that data to the Environmental Protection  
6 Agency.

7 Q. What's the status of that work today, sir?

8 A. I don't know.

9 Q. Who's the lead person to see that that work is  
10 completed?

11 A. That will be Shelly McClary.

12 Q. Sir, are you aware that the EPA and its  
13 contractor have actually issued a draft quality  
14 assurance project plan and work plan for the  
15 modeling?

16 A. No.

17 Q. Sir, did Mr. Craig or Mr. Derichsweiler bring  
18 back to you a copy of a PowerPoint presentation that  
19 was made by EPA at the November meeting?

20 MR. NANCE: Your Honor, beyond the scope.

21 And if they did, it would be hearsay.

22 MR. McDANIEL: Well, I haven't offered it  
23 yet, Your Honor, so I'm just trying to establish --

24 THE COURT: A little early. Go ahead.

25 Q. (By Mr. McDaniel) Do you recall the question,

1 sir?

2 A. Yes, they did.

3 MR. MCDANIEL: May I approach, Your Honor?

4 THE COURT: You may.

5 Q. (By Mr. McDaniel) Mr. Thompson, I've handed  
6 you what's marked for identification as Defendants'  
7 Joint Exhibit 8131. Do you recognize this?

8 A. Yes.

9 Q. What is it?

10 A. This is the PowerPoint that they brought back  
11 from the meeting.

12 Q. And this -- who put on this presentation?

13 A. I don't know.

14 Q. Your people didn't put it on, did they?

15 A. No.

16 Q. Who gave this to you, I'm sorry?

17 A. Mr. Derichsweiler gave it to me.

18 Q. All right. And Mr. Derichsweiler told you it  
19 was provided to him at the meeting?

20 A. Yes.

21 MR. MCDANIEL: Your Honor, based upon the  
22 same foundation and reasons discussed with the --  
23 Your Honor, based upon the prior foundation and  
24 arguments I made with the prior exhibit, in addition  
25 to the fact that I think this document qualifies

1 under the hearsay exception as a document and report  
2 reflecting activities of the agency, and I think the  
3 court can fairly consider the residual exception.  
4 It's rather -- the indicia of reliability here, I  
5 think, are strong. And so defendants offer for  
6 admission 8131.

7 THE COURT: Mr. Nance.

8 MR. NANCE: Your Honor, I believe it is  
9 hearsay. It's certainly not your typical government  
10 report. As far as activities of the agency, this is  
11 not the sort of thing that EPA is reporting on its  
12 typical activities, but it's about a specific event,  
13 the meeting which you have heard described to you.  
14 I don't believe it's admissible. I think it still  
15 is hearsay.

16 MR. MCDANIEL: Your Honor, I think this is  
17 the last opportunity in this trial that the court is  
18 going to have to gain information about what's going  
19 on with this report and the EPA activity. There's  
20 really not much challenge to the reliability of the  
21 document. And whether you want to view this from a  
22 hearsay exception standpoint as a report or a  
23 statement by the agency, or consider it only for the  
24 truth of the matter that EPA said it, I think there  
25 are multiple grounds that the court could accept

1 this. And I think it will be well served by being  
2 as informed as possible about this.

3 THE COURT: For what purpose or purposes is  
4 it being offered?

5 MR. MCDANIEL: I'm offering it to the court  
6 first to show that the State of Oklahoma is engaged  
7 in a two-state process convened by the Illinois --  
8 excuse me, convened by the EPA for purposes of  
9 addressing the very concerns that this court is  
10 being asked to address.

11 THE COURT: You've already done that  
12 through the testimony and the letter, right? What  
13 other purposes are you seeking to admit this  
14 particular document?

15 MR. MCDANIEL: I think what's most critical  
16 about this particular document, Your Honor, is on  
17 the final slide, and that is the time frame. As  
18 this court considers the remedies -- or the last two  
19 slides, excuse me.

20 As the court considers the remedies that  
21 it's being asked to order and assertions by the  
22 State with regard to urgency and a need for action,  
23 we have a critical paradox that this document shows  
24 the court; whereas the State of Oklahoma apparently  
25 has no time frame for acting on its own to initiate

1 a TMDL and asserts that is powerless to do anything  
2 with the state of Arkansas.

3                 The EPA is telling the State of Oklahoma  
4 and the state of Arkansas that it will act and it  
5 will have a TMDL in place, and has set forth the  
6 schedule that it shall be completed by September 15,  
7 2011.

8                 THE COURT: Point me to the government  
9 activity. You're talking about 803(6)?

10                 MR. MCDANIEL: (8), sir.

11                 THE COURT: That's public records. But  
12 you've --

13                 MR. MCDANIEL: Records, reports, statements  
14 or data compilation in any form of public offices or  
15 agencies --

16                 THE COURT: Setting forth (A) the  
17 activities of the office or the agency?

18                 MR. MCDANIEL: Correct.

19                 THE COURT: All right. On that particular  
20 point, 803(8)(A) and focusing on time frame, the  
21 activities of the EPA relative to a time frame.

22 Mr. Nance.

23                 MR. NANCE: Your Honor, this is not  
24 something that sets forth the regular activities of  
25 the EPA as an agency. It's simply the results of a

1 planning meeting, and it may or may not come to  
2 pass. And to the extent that it forecasts a future  
3 event, it is not a regular activity of the agency.

4 THE COURT: Is there a requirement that  
5 803(8)(A) reflect a regular activity of the agency?  
6 Mr. McDaniel.

7 MR. MCDANIEL: I'm sorry, Your Honor, I got  
8 distracted because it's appearing to me that this  
9 copy may not be the right copy of the --

10 THE COURT: Yes, sir. I don't see any  
11 proposed time frame.

12 MR. MCDANIEL: That's --

13 (Off-the-record discussion was had.)

14 THE COURT: We need to give Terri a break  
15 here. We've been going on too long. And although I  
16 intend to get you to your dentist -- you may want me  
17 to hold you over here -- but we need to give the  
18 court reporter a break here. We'll be in recess.

19 (Recess was had.)

20 THE COURT: Mr. McDaniel.

21 MR. MCDANIEL: Your Honor, I created a  
22 little confusion I want to straighten out so the  
23 court can render its decision about admitting these  
24 documents. The one I handed you marked as 8131 is  
25 -- there were really two components to the

1 PowerPoint. I handed you the first component. The  
2 second one is marked as 8126. That includes the  
3 dates that I so vigorously argued for.

4 So, Your Honor, the argument that I made  
5 with regard to the dates and its relevance and the  
6 basis for admissibility apply to what has been  
7 marked as Defendants' 8126.

8 The prior exhibit, 8131, the balance of the  
9 PowerPoint discussing -- or including the EPA's  
10 statements about its activities still assert -- fall  
11 within the public records exception, 803(8)(A). So  
12 we offer those both for admission.

13 THE COURT: Well, the arguments seem to go  
14 more directly to 8126 as opposed to 8131.

15 Mr. Nance.

16 MR. NANCE: Your Honor, Ms. Moll has handed  
17 me an excerpt from McCormick about 81 -- 803(A)(8)  
18 -- (8)(A), activities of the office. And McCormick  
19 indicates that an example of that sort of record is  
20 a record of receipts or disbursements of the  
21 Treasury Department as an example, and then  
22 comments, "In addition to the assurances of  
23 reliability common to public records and reports  
24 generally, this group has the assurances of accuracy  
25 that characterize business records that are

1 routinely admitted."

2 These are not the sort of things that are  
3 like business records or records of routinely  
4 conducted activities. They're specific documents  
5 about specific events. And 8126 is not even a  
6 report of the activities of the office; it's a  
7 report of the possible future activities of the  
8 office. And I don't think either one, but  
9 particularly, 8126 meets the exception that is  
10 offered.

11 In addition, there's just a foundational  
12 authentication issue because the director wasn't at  
13 this meeting, and it's been handed to him by his  
14 people. So we would ask the court to deny the  
15 admission of both 8131 and 8126.

16 THE COURT: Any response to the regularly  
17 conducted activities argument?

18 MR. MCDANIEL: Well, this doesn't say the  
19 regularly conducted activities. It says, "the  
20 activities." And it does include a statement by the  
21 agency regarding its activities.

22 But I think, Your Honor, based upon the  
23 testimony that you've heard over the 30 minutes  
24 before the break, I think the court has been given  
25 an ample record with regard to the indicia of

1 trustworthiness of this document.

2                   So I certainly can continue to argue the  
3 point that this is a public record, but I think the  
4 residual exception is a sound basis for admitting  
5 the document, particularly given how probative it  
6 is, given the fact that all of this transpired while  
7 we were in trial, which is difficult for the  
8 defendants to then bring a custodian, etcetera, here  
9 before the court.

10                  THE COURT: Well, of course, the difficulty  
11 of bringing a custodian doesn't necessarily reflect  
12 on reliability or make its indicia of reliability  
13 stronger.

14                  MR. MCDANIEL: Certainly.

15                  MR. NANCE: Your Honor, I might add, I  
16 think they could have brought Mr. Derichsweiler, or  
17 I believe some of these Arkansas attendees are on  
18 their witness list. And the director certainly  
19 wasn't even at the meeting.

20                  THE COURT: Mr. McDaniel.

21                  MR. MCDANIEL: Well, I think that this  
22 comes down to authentication, Your Honor. I  
23 certainly am not trying to exert any type of undue  
24 influence on the court. That sounded horrible. No,  
25 I take that back. I'm not trying to --

1 THE COURT: That's your job, isn't it?

2 MR. MCDANIEL: I think the "undue" part is  
3 what sounded bad. I am trying to influence you,  
4 although not very well.

5           But when we were going through our pretrial  
6 conference, one of the statements the court made  
7 which I very much took note of, and that is when it  
8 comes to issues of identification and  
9 authentication, the court is not going to allow  
10 parties to simply throw up unnecessary roadblocks to  
11 getting to the truth.

12                   And I think, here, it's -- I understand  
13 these are legitimate evidentiary points Mr. Nance is  
14 making, so I'm not making that argument, but the  
15 State has done nothing to tell this court about  
16 this. And we have worked with every scrap of  
17 evidence that we could find and information we could  
18 obtain to make the court aware of what's going on in  
19 this important work at EPA.

20 Mr. Thompson has testified that his people  
21 brought this back, gave it to him, representing that  
22 this is what was provided to them at the EPA  
23 meeting, with the expectation that he would review  
24 it, understanding that's what this meant.

THE COURT: All right. I don't believe he

1 said that with regard to 8126, however, has he?

2 MR. MCDANIEL: No, we haven't discussed  
3 that, but I will gladly do so.

4 THE COURT: The objection is sustained as  
5 to 8131. I'll allow further questioning with regard  
6 to 8126.

7 MR. MCDANIEL: Thank you, Your Honor.

8 Q. (By Mr. McDaniel) Mr. Thompson, I handed you  
9 at the end of the break what's been marked as  
10 Defendants' Joint Exhibit 8126, two pages. Do you  
11 recognize that, sir?

12 A. Yes.

13 Q. What is it?

14 A. It's part of the material that was given to me  
15 by Mr. Derichsweiler.

16 Q. Was it your understanding that this material  
17 was provided to Mr. Derichsweiler at this EPA  
18 meeting in Dallas on November 20, 2009?

19 A. Yes.

20 Q. Did Mr. Derichsweiler give this material to you  
21 so you could be informed as to what occurred at this  
22 meeting?

23 A. Yes.

24 Q. All right, sir.

25 MR. MCDANIEL: Your Honor, defendants offer

1 8126.

2 MR. NANCE: Same objections, Your Honor.

3 THE COURT: The court will admit 8126

4 pursuant to 803(8)(A) and the residual exception.

5 The tentative schedule set forth here sets forth the  
6 -- a regular activity of the EPA insofar as the EPA  
7 engages in modeling projects. It is not a  
8 representation as to activities that have occurred,  
9 but it is a regular activity of the EPA to set  
10 schedules.

11 The document is admitted not as proof of  
12 that which will be done by those dates but, rather,  
13 for proof that the EPA has set the tentative  
14 schedule. 8126 is admitted.

15 Also under the residual exception, there's  
16 sufficient indicia of reliability as to the setting  
17 of a tentative schedule by the EPA.

18 MR. MCDANIEL: Thank you for allowing us to  
19 grind through that, Your Honor.

20 Q. (By Mr. McDaniel) Let me wrap this particular  
21 aspect up, Mr. Thompson. Thank you for your  
22 patience as lawyers do what they do.

23 The -- this EPA process, the two-state  
24 process, to your knowledge, is it -- it's not tied  
25 to your office's concerns about the TMDL

1 implementation issues with regard to -- that you  
2 expressed with regard to completing the Oklahoma  
3 TMDL?

4 A. It is a concern --

5 Q. Let me try to ask a better question. The  
6 concerns that we discussed when you and I first  
7 started talking this morning that you expressed with  
8 the implementation program for the Oklahoma TMDL,  
9 that is not going to affect the EPA's process,  
10 correct?

11 A. I don't know that that's the case. Issues will  
12 be raised by both states in this process. How EPA  
13 chooses to react to those, I have no way of knowing.

14 Q. Okay. Have those concerns been communicated to  
15 the EPA as of yet?

16 A. Not to my knowledge, but they will be. This  
17 was a kickoff meeting. And I don't know that we've  
18 been afforded that opportunity yet, but we will.

19 Q. All right. And one thing I want to clear up  
20 with regard to the Scenic River standard.

21 MR. McDANIEL: And I want to ask you,  
22 please, if you can bring up -- Tyson Demonstrative  
23 96 which is simply a copy of the Oklahoma  
24 Administrative Code, Title 785, Section 45-5-19,  
25 Aesthetics. And if you could blow that up as much

1 as you could so Mr. Thompson can see it on the  
2 screen. The text.

3 Q. (By Mr. McDaniel) Can you see it, sir?

4 A. Yes.

5 Q. Do you agree that that is the water quality  
6 criteria for Scenic Rivers in Oklahoma?

7 A. Yes.

8 Q. And under section B -- excuse me, C,  
9 subparagraph 2, included within that rule is the  
10 30-day geometric mean total phosphorus concentration  
11 criteria, correct?

12 A. Yes.

13 Q. So this geometric mean methodology is part of  
14 the Scenic Rivers criteria, at least by rule,  
15 correct?

16 A. That's correct.

17 Q. And the Water Resources Board can change this  
18 rule, sir?

19 A. They can.

20 Q. All right. Now, is it true, sir, that by  
21 statute, each Oklahoma environmental agency must  
22 promulgate a water quality standards implementation  
23 plan --

24 MR. NANCE: Judge, we're beyond the scope  
25 of cross.

1                   MR. MCDANIEL: If I could complete my  
2 question, Your Honor, then I can respond.

3                   THE COURT: All right. Go ahead and  
4 complete the question.

5                   MR. NANCE: I apologize.

6                   MR. MCDANIEL: Just because I was  
7 stuttering doesn't mean I was done.

8                   THE COURT: Frankly, I thought you were  
9 done as well.

10 Q. (By Mr. McDaniel) Isn't it true, Mr. Thompson,  
11 that, by statute, every environmental agency must  
12 promulgate a water quality standards implementation  
13 plan for its jurisdictional area of responsibility,  
14 specifying how the agency utilizes and enforces  
15 Oklahoma's water quality standards for surface water  
16 and groundwater?

17                  MR. NANCE: Same objection, beyond the  
18 scope of cross.

19                  MR. MCDANIEL: Your Honor, this goes  
20 directly to the line of questions Mr. Nance asked of  
21 Mr. Thompson, suggesting that even if the TMDL was  
22 enacted, there is nothing that could be done with  
23 regard to poultry litter in order to bring it within  
24 compliance with the TMDL. And I want to point out  
25 that Oklahoma statutes are directly contrary to that

1 point.

2 THE COURT: Mr. Nance.

3 MR. NANCE: Your Honor, I don't know what  
4 statute he's talking about, but I didn't ask about a  
5 water quality implementation plan. I asked about  
6 enforcing a TMDL.

7 MR. MCDANIEL: It's the water quality  
8 standards implementation plan that proves that the  
9 statements made are incorrect. And, in fact, ODAFF,  
10 just like ODEQ, is bound to use its jurisdiction to  
11 meet TMDL requirements.

12 MR. NANCE: To the extent he's making an  
13 argument about ODAFF, he's way beyond the scope of  
14 cross.

15 THE COURT: As I recall, in your questions,  
16 Mr. Nance, you asked who had authority. And  
17 Mr. Thompson said it was ODAFF, correct? You're not  
18 trying to show, Mr. McDaniel, that ODEQ has such  
19 authority?

20 MR. MCDANIEL: Not directly. ODEQ, as the  
21 parent agency over TMDL, is required by statute, as  
22 are all the other agencies, to coordinate with ODEQ  
23 to achieve the TMDL. That includes ODAFF. That's  
24 the direction of my questions, sir.

25 THE COURT: First of all, I don't know that

1 this question really goes to impeach anything that  
2 Mr. Thompson said. He said ODAFF has the authority,  
3 to his knowledge, right?

4 MR. MCDANIEL: Well, the -- he -- Mr. Nance  
5 asked whether ODEQ had any authority regarding  
6 poultry. He said they had no authority, they can  
7 only make recommendations in the TMDL. He said  
8 ODAFF has -- whatever authority there is, ODAFF has  
9 it.

10 And the point what I'm impeaching is, this  
11 is -- these TMDL requirements by the interplay of  
12 the water quality standards implementation plan are  
13 not recommendations, they are legal requirements.

14 MR. NANCE: Actually, Your Honor, the  
15 director said he didn't know what ODAFF's authority  
16 was. This is legal argument rather than trying to  
17 develop anything factual from this witness.

18 MR. MCDANIEL: I'm trying to explore the  
19 statutes and how the agencies interrelate in order  
20 to satisfy the requirements of the TMDL. And as a  
21 director of ODEQ --

22 THE COURT: These are legal issues. The  
23 objection is sustained.

24 Q. (By Mr. McDaniel) Mr. Thompson, is it your  
25 understanding that all the Oklahoma environmental

1 agencies are obliged to use their jurisdictions to  
2 satisfy the requirements of a TMDL?

3 A. Yes.

4 Q. Is it your understanding that ODAFF has  
5 regulatory authority over poultry feeding operations?

6 A. Yes.

7 Q. And you told Mr. Nance that you expected one  
8 outcome of the TMDL would be a requirement for  
9 reduced loading, both point and nonpoint --

10 A. Yes.

11 Q. -- in the IRW --

12 A. Yes.

13 Q. -- right?

14 If that's the case, if the TMDL issued by  
15 whomever says there needs to be reduced loading from  
16 nonpoint sources, and nonpoint sources were deemed  
17 to include activities encompassing poultry litter  
18 application, sir, is it your belief that under  
19 Oklahoma law that ODAFF would then be obliged to  
20 exercise its regulatory authority to change litter  
21 application standards in the Illinois River  
22 Watershed?

23 MR. NANCE: Objection. Calls for a legal  
24 conclusion.

25 THE COURT: Sustained.

1 Q. (By Mr. McDaniel) If your TMDL or any TMDL  
2 issued by the EPA, for that matter, calls for a  
3 reduction of nonpoint source phosphorus load in the  
4 Illinois River Watershed, what duty, if any, does  
5 ODAFF have with regard to poultry feeding  
6 operations?

7 MR. NANCE: Well, same objection. Calls  
8 for a legal conclusion, and there's no foundation  
9 that he knows the answer. In fact, he says he  
10 doesn't.

11 THE COURT: Sustained.

12 Q. (By Mr. McDaniel) Mr. Thompson, if -- assuming  
13 -- assuming EPA fulfills the plans it has set forth  
14 for a two-state TMDL, is it your understanding that  
15 Oklahoma will take all necessary steps to fulfill  
16 the requirements of that TMDL?

17 A. I can speak for the DEQ, and the answer is yes.

18 Q. Thank you.

19 MR. MCDANIEL: I will pass the witness,  
20 Your Honor.

21 THE COURT: I take it you can't speak for  
22 ODAFF. Mr. Nance.

23 MR. ELROD: Your Honor, I just have a few.

24 THE COURT: I'm sorry. Mr. Elrod.

25 MR. ELROD: I just have a very few.

1

**REDIRECT EXAMINATION**

2 BY MR. ELROD:

3 Q. Does Oklahoma have -- I'm sorry, Mr. Thompson,  
4 I'm John Elrod, and I represent Simmons Foods. I  
5 met you in the hallway about ten years ago in your  
6 offices, but there's no reason why you would  
7 remember that encounter.

8 Oklahoma has a governor.

9 A. Yes.

10 Q. Do you report to the governor?

11 A. I report to the Environmental Quality Board,  
12 and that board is appointed by the governor.

13 Q. Yes, sir. And does Secretary Peach report to  
14 the governor?

15 A. I'm not -- I'm not clear what those lines are.

16 Q. Does Duane Smith report to the governor?

17 MR. NANCE: Judge, this is beyond the scope  
18 of cross certainly.

19 THE COURT: Sustained.

20 MR. ELROD: Your Honor, it has to do with  
21 the power of the State of Oklahoma to do what needs  
22 to be done, and I'm just --

23 THE COURT: I understand. It's beyond the  
24 scope.

25 MR. ELROD: All right.

1 Q. (By Mr. Elrod) The statement of joint  
2 principles that was entered by Arkansas and  
3 Oklahoma, does it not say in there, sir, that  
4 Oklahoma will not ask Arkansas to do anything it  
5 would not be willing to do itself?

6 MR. NANCE: Again, beyond the scope,  
7 Your Honor.

8 MR. ELROD: No, Your Honor, it's not beyond  
9 the scope. It has to do with spending money.

10 Well --

11 THE COURT: I wondered the same question,  
12 frankly, Mr. Elrod, but it is beyond the scope.  
13 Sustained.

14 Q. (By Mr. Elrod) My understanding of your  
15 testimony, sir, was that your concern about the bias  
16 created by the 30-day geomean in favor of nonpoint  
17 sources because of the way that that mathematics --  
18 that math occurs would cause, unfairly, Stillwell  
19 and Tahlequah to spend money to upgrade their  
20 facilities; was that not your testimony?

21 A. Tahlequah and Westville. Well, I don't know  
22 that I said it would unnecessarily cause them to  
23 spend money; I said that there was a bias in the way  
24 that the TMDL was done.

25 Q. Yes, sir. And that the results of the TMDL may

1 require them to spend money to upgrade their  
2 facilities: Stillwell, Westville and Tahlequah?

3 A. That's correct.

4 Q. Are you aware, sir, that the cities of  
5 northwest Arkansas, as a result of that statement of  
6 joint principles, have spent hundreds and millions  
7 of dollars to upgrade their facilities?

8 A. I am aware that they have upgraded some of  
9 their facilities.

10 Q. Fayetteville has opened a new westside facility  
11 that's state-of-the-art, cost over \$100 million,  
12 correct?

13 A. I don't know the cost and I don't know -- I  
14 know they've opened a new facility.

15 Q. Rogers has spent money. And Siloam Springs is  
16 currently upgrading its plant, correct, sir?

17 A. I don't know that specifically.

18 Q. Would it be a violation of the joint statement  
19 of principles for Oklahoma to refuse to upgrade  
20 their facilities to meet the standards now being met  
21 in Arkansas, sir?

22 MR. NANCE: Objection. Calls for a legal  
23 conclusion, and it's beyond the scope.

24 THE COURT: Sustained.

25 MR. ELROD: That's all I have.

1

**REDIRECT EXAMINATION**

2 BY MR. HOPSON:

3 Q. The ground has been well trampled, and I know  
4 you want to get off to the dentist. But I've just  
5 got to ask you about the time line, okay,  
6 Mr. Thompson.

7 How long have you been the head of the DEQ?

8 A. Six and a half years.

9 Q. Okay. And that's far enough back that you'll  
10 recall that this TMDL process actually started about  
11 '03 or '04; isn't that right?

12 A. I suspect that's right, yes.

13 Q. To clarify, I'm talking about the specific  
14 Oklahoma TMDL that was being started by your agency,  
15 right?

16 A. Um --

17 Q. There's the EPA TMDL, and there's the Oklahoma  
18 TMDL. And we're focusing now on the Oklahoma TMDL.  
19 That started back in '03 and '04, right?

20 A. I don't have an independent recollection, I'm  
21 sorry, of that. But I wouldn't deny it.

22 Q. Okay. Do you recall that EPA had approved  
23 something called a QAAP by 2004?

24 A. Yes.

25 Q. And tell His Honor what the QAAP is.

1 A. It's the quality assurance plan by which any  
2 activity would be done.

3 Q. And by 2004, you'd also retained some  
4 scientists at the university to do some preliminary  
5 modeling in connection with the TMDL; isn't that  
6 right?

7 MR. NANCE: Judge, it's beyond the scope of  
8 cross.

9 THE COURT: I don't believe so. Overruled.

10 THE WITNESS: Yes.

11 Q. (By Mr. Hopson) Dan Storm was one of those  
12 scientists, right?

13 A. Yes.

14 Q. And Dan Storm's report is actually one of the  
15 things that caused you to have some concerns about  
16 the unfairness inherent in the phosphorus criterion,  
17 isn't it?

18 A. What caused me to have concern was a report  
19 given to me by my water quality division director  
20 Jon Craig. Mr. Craig may have -- that's what caused  
21 my concern.

22 Q. Well, let me ask the question this way: Do you  
23 know and do you recall that Dr. Storm actually  
24 concluded that 100 percent litter export would have  
25 no impact on meeting the phosphorus criterion in the

1 Scenic Rivers? Do you recall that?

2 MR. NANCE: Beyond the scope of cross, and  
3 it's hearsay.

4 MR. HOPSON: I'm asking if he recalls  
5 something. How can that be hearsay?

6 THE COURT: Overruled.

7 THE WITNESS: I do not.

8 Q. (By Mr. Hopson) You don't recall reading  
9 Dr. Storm's report or that influencing your concerns  
10 about this alleged unfairness in the phosphorus  
11 criterion?

12 A. No.

13 Q. Do you recall Mr. Nance asking you about what  
14 the outcome of a TMDL might be? Do you recall those  
15 questions?

16 A. Yes.

17 Q. And you said that there was no federal law that  
18 could compel regulation of nonpoint sources; isn't  
19 that right?

20 A. Yes.

21 Q. But you're not suggesting, by the absence of  
22 federal law, that the State of Oklahoma would be  
23 powerless to address nonpoint sources, are you?

24 MR. NANCE: Objection, calls for a legal  
25 conclusion.

1 MR. HOPSON: From the head of the DEQ,  
2 who's already testified about the law and the  
3 absence of federal law.

4 THE COURT: Overruled.

5 THE WITNESS: I'm sorry, could you restate  
6 the question.

7 Q. (By Mr. Hopson) Sure. Let me set it up  
8 properly. In the course of your cross-examination  
9 by Mr. Nance, he was asking you about what the  
10 outcomes would be if a TMDL was done. Do you recall  
11 those questions?

12 A. Yes.

13 Q. And one of the things that you told us is that  
14 there would be no federal law, as I understood you,  
15 that would compel the regulation of nonpoint sources  
16 as an outcome of the TMDL process. Do I have that  
17 right?

18 A. That's correct.

19 Q. And by testifying to that, and by testifying to  
20 the absence of your agency's ability to regulate  
21 poultry, you weren't suggesting to His Honor that  
22 the State of Oklahoma, as a whole, is powerless to  
23 deal with nonpoint sources, are you?

24 A. My recollection is that I said if such  
25 jurisdiction existed, it existed with the Department

1 of Agriculture.

2 Q. So the answer to my question is, no, you  
3 weren't suggesting to His Honor that the State of  
4 Oklahoma is powerless to regulate nonpoint sources,  
5 correct?

6 MR. NANCE: Objection, asked and answered.

7 THE COURT: Sustained.

8 Q. (By Mr. Hopson) Let me ask you this. Last  
9 thing I want to discuss. I believe you said to  
10 Mr. McDaniel that you were going to express, either  
11 personally or through your agency on behalf of the  
12 State of Oklahoma, the concerns you had about the  
13 phosphorus criterion in the EPA TMDL process; is  
14 that correct?

15 A. That's correct.

16 Q. That hasn't happened yet, as far as you know,  
17 sir?

18 A. No, it hasn't. As far as I know, it has not.

19 Q. But it's also true that nobody at the EPA has  
20 said that their time line or their TMDL process is  
21 going to wait on you and the Oklahoma resources --  
22 Water Resources Board getting together on this  
23 issue, right?

24 MR. NANCE: Objection. Calls for hearsay  
25 and speculation on what the EPA has said or may have

1 said.

2 THE COURT: Overruled.

3 THE WITNESS: I'm sorry, would you repeat  
4 the question, please.

5 Q. (By Mr. Hopson) Sure. On the one hand, you  
6 said -- and I understand and appreciate what you're  
7 saying -- that for the EPA TMDL process, you wanted  
8 to express your views, your concerns that you've  
9 explained to us today about the way the 0.037  
10 phosphorus criterion works, right?

11 A. Yes.

12 Q. And you're going to explain to the EPA the same  
13 thing you explained to His Honor, Judge Frizzell,  
14 today, right?

15 A. That's correct.

16 Q. My point is simply this: While I appreciate  
17 you're going to do that, you don't have any reason  
18 to believe that the EPA's current timetables or the  
19 hiring of its experts or the modeling that's going  
20 on is going to wait for you and the Oklahoma Water  
21 Resources Board to come to some conclusion on that  
22 issue, do you?

23 A. I don't have any way to know either way how  
24 that discussion will impact what EPA does.

25 Q. I have no further questions. Thank you,

1 Mr. Thompson.

2 THE COURT: I believe that covers the  
3 examination. Mr. Thompson, thank you very much for  
4 being here today. You're excused.

5 MR. NANCE: May I have a little recross,  
6 Your Honor? I'll be very brief.

7 THE COURT: Well, of course, this is  
8 essentially reredirect. You -- I'm sorry, no,  
9 you're entirely right. I'm sorry. The way this  
10 came on, it confused -- you do have an opportunity,  
11 I'm sorry. You do have a recross.

12 MR. NANCE: We're here in an unusual  
13 posture, Your Honor.

14 **RECROSS EXAMINATION**

15 BY MR. NANCE:

16 Q. Sir, would you look at the EPA letter, which is  
17 Defendants' Exhibit 8090. Do you still have that in  
18 front of you?

19 A. This is the letter from EPA to Mr. Strong and  
20 Ms. Marks?

21 Q. Correct.

22 A. Yes, I have it.

23 Q. The first paragraph there about halfway down  
24 mentions recent permitting activities involving the  
25 Northwest Arkansas Conservation Authority. Do you

1 see that language?

2 A. I do.

3 Q. Are you familiar with that permitting activity?

4 A. Generally, yes.

5 Q. Is the Northwest Arkansas Conservation  
6 Authority a proposed new nonpoint source discharger  
7 in the watershed?

8 A. Yes.

9 Q. What action, if any, did the State of Oklahoma  
10 or your agency take with regard to that permit?

11 A. We --

12 MR. MCDANIEL: Objection, scope,  
13 Your Honor.

14 THE COURT: Overruled.

15 THE WITNESS: We commented that we believed  
16 that it was inappropriate for any discharge -- or  
17 that the discharge from this facility be allowed in  
18 an impaired waterbody in the state of Arkansas.

19 Q. (By Mr. Nance) And has that been something of  
20 an issue as between Oklahoma, Arkansas and the EPA?

21 A. Yes.

22 Q. In the next paragraph down, I think  
23 Mr. McDaniel read a sentence, it begins on the third  
24 line, "EPA's purpose in this effort is to provide a  
25 technically sound basis upon which regulatory and

1 nonregulatory decisions can be confidently based  
2 that will lead to reductions in nutrients from both  
3 point and nonpoint..." Do you see that?

4 A. Yes.

5 Q. Are the regulatory decisions that are mentioned  
6 there those dealing with point sources?

7 A. Yes.

8 Q. Are the nonregulatory decisions there the ones  
9 dealing with nonpoint sources?

10 MR. McDANIEL: I object, Your Honor. In  
11 the court's ruling in sustaining the objection, I  
12 was not allowed to explore with Mr. Thompson the  
13 agency's jurisdiction to deal with nonpoint sources  
14 with regard to TMDLs. So I think it's inappropriate  
15 for Mr. Nance to have the liberty to do that.

16 MR. HOPSON: And it calls for speculation,  
17 Your Honor.

18 THE COURT: The objection is sustained.

19 Q. (By Mr. Nance) On the top of the second page  
20 of the letter, Mr. Thompson, where the EPA says, "We  
21 expect this modeling effort may lead to the  
22 development of one or more Total Maximum Daily Loads  
23 for the Illinois basin," do you see that?

24 A. Yes.

25 Q. Is it your understanding that it is a done

1 deal, that the EPA will do a single TMDL for both  
2 sides of the border?

3 A. I believe that to be the goal.

4 Q. Now, on Exhibit 8126, which was the  
5 timetable --

6 A. Yes.

7 Q. How long have you been involved in  
8 environmental protection in the state of Oklahoma?

9 A. Twenty-five years.

10 Q. During that 25 years, have you had an  
11 opportunity to become acquainted with EPA's track  
12 record in meeting its own deadlines?

13 A. Yes.

14 Q. Is that a good track record or a bad track  
15 record?

16 MR. HOPSON: Objection, Your Honor, calls  
17 for opinion and speculation.

18 THE COURT: I don't know how much  
19 speculation is involved. Overruled. Go ahead. You  
20 may answer.

21 THE WITNESS: I'm torn between answering  
22 "rarely" and "never."

23 MR. NANCE: Nothing further, Your Honor.

24 THE COURT: I'm interested with the  
25 nomenclature. The Northwest Arkansas Conservation

1 Authority, that's basically a wastewater treatment  
2 group?

3 THE WITNESS: Wastewater treatment plant at  
4 Bentonville.

5 THE COURT: Okay. We're in 1984, ladies  
6 and gentlemen. Now, I'm sure you're aware of Siloam  
7 Springs. I've had lots of testimony here with  
8 regard to the wastewater treatment plant there  
9 dumping into Sager Creek which then dumps into Flint  
10 Creek. Are you aware of the -- where they are in  
11 the process?

12 THE WITNESS: This is Siloam Springs,  
13 Arkansas?

14 THE COURT: Yes.

15 THE WITNESS: No, I'm not.

16 THE COURT: All right. You may be excused.

17 THE WITNESS: Thank you very much, sir.

18 THE COURT: Dr. Sullivan, you're back.

19 Go ahead, Mr. Bullock.

20 MR. BULLOCK: Good morning, almost.

21 THE WITNESS: Good morning, Mr. Bullock.

22 **CROSS-EXAMINATION**

23 BY MR. BULLOCK:

24 Q. Doctor, in terms of the scope of your  
25 expertise, do you regard yourself as an expert in

1 watershed modeling?

2 A. I've been involved in a great many projects on  
3 watershed modeling, but I'm not a modeler.

4 Q. So in terms of listing your expertise, it  
5 wouldn't be as a watershed modeler, would it?

6 A. I think I would list it as I have substantial  
7 expertise in watershed modeling, but I do not sit at  
8 the computer and run a watershed model.

9 Q. Have you ever run watershed models?

10 A. No.

11 Q. How about as a soil scientist, do you regard  
12 yourself as being an expert in soil science?

13 A. A large amount of the work that I do on  
14 watersheds, which is much of what I do, involves  
15 both modeling and the work on soils. I have been  
16 involved in conducting soil surveys and instructing  
17 federal personnel how to conduct soil surveys. I  
18 published research in the Soil Scientist Society of  
19 America Journal.

20 So I have a fair amount of expertise in  
21 terms of soils. But, again, I would not classify  
22 myself as a soil scientist but, rather, as an  
23 environmental scientist, part of which is soils.

24 Q. Do you regard yourself as an expert in geology?

25 A. Again, the environmental work that I do does

1 involve geology, not as much probably as it involves  
2 soils, but I've done a number of studies that have a  
3 strong geological component, and published the  
4 research on some of that in the scientific  
5 literature.

6 So I don't regard myself as a geologist,  
7 but I would say that as an environmental scientist,  
8 I have a fair amount of understanding and expertise  
9 in geology.

10 Q. Do you regard yourself as an expert in  
11 limnology?

12 A. I would say that the majority probably, or at  
13 least a large percentage of my publications are  
14 limnological publications. So I certainly regard  
15 myself as an expert in limnology. But I don't  
16 classify myself -- I don't pigeonhole myself into  
17 these various categories but, rather, classify  
18 myself as an environmental scientist, which includes  
19 these categories.

20 Q. Have you ever assessed the eutrophic state of  
21 lakes?

22 A. I have evaluated nutrients in lakes, but I  
23 would not --

24 Q. Sir, please --

25 A. -- I would not say that I classified lakes

1 relative to the trophic status, no.

2 Q. Do you regard yourself as an expert in  
3 hydrology?

4 A. Again, I do have a lot of expertise in  
5 hydrology. I publish in the Journal of Hydrology.  
6 I've conducted a lot of studies with a very strong  
7 hydrological component, but I do not classify myself  
8 as a hydrologist.

9 Q. Do you regard yourself as a statistician?

10 A. I have a fair amount of experience in  
11 statistics, but I do not call myself a statistician.

12 Q. Okay. So let me be sure that I have this  
13 right. You consider yourself as having expertise in  
14 watershed modeling, soils, geology, limnology,  
15 hydrology, and statistics?

16 A. That's correct. That's called  
17 multidisciplinary environmental science.

18 Q. And those projects where there are substantial  
19 questions of, for instance, geology, do those  
20 projects generally involve somebody that would be  
21 considered an expert in geology?

22 A. Are you speaking of the projects that I have  
23 worked on? Is that the question?

24 Q. Yes, sir.

25 A. I would say that probably the most prominent

1 project I worked on that included a very strong  
2 geological component, which was for the Southern  
3 Appalachian Mountains Initiative, part of the work I  
4 did for them, and I had a geological publication  
5 from that, I collaborated with a scientist who would  
6 also classify himself as an environmental scientist  
7 rather than a geologist. But I would acknowledge  
8 that that scientist did have a lot of involvement in  
9 the geological aspects of that project. We did it  
10 together.

11 Q. That's generally the way these projects work is  
12 that because they are multidisciplinary, they  
13 involve people with multiple disciplines, correct?

14 A. It depends on the project. A great many of the  
15 projects that are in my resume and projects that  
16 I've talked about involved myself as not only the  
17 lead scientist but the only Ph.D.-level scientist.  
18 So many of the multidisciplinary environmental  
19 projects I've conducted where I would not have had  
20 the involvement and participation of other  
21 Ph.D.-level scientists.

22 But on the other hand, there also are a  
23 number of projects that I've done that did involve  
24 collaboration with multiple scientists; in some  
25 cases, as many as ten, from a variety of

1 disciplines. So it depends on which project you're  
2 speaking of.

3 Q. Depends on the scope of the project and how  
4 technical the issues are in that project, correct?

5 A. I think those would be two of the things involved.

6 There would be many other considerations as well in terms  
7 of how I would go about selecting other scientists to  
8 collaborate with on one of my projects.

9 Q. In performing your work in this case, did you direct  
10 or collect yourself any environmental samples?

11 A. Did I collect environmental samples? No.

12 Q. Did you direct anyone else to?

13 A. No.

14 Q. Did you ask for any environmental data other than  
15 reviewing the -- let me rephrase.

16 Did you ever ask for any environmental samples  
17 to be taken?

18 A. I would not say I asked for environmental samples to  
19 be taken. I would say I discussed the possibility of  
20 collecting environmental samples, and I also discussed  
21 the environmental samples that may have been collected in  
22 conjunction with some work by Jim Chadwick for the  
23 defendants.

24 Q. Doctor, just to help set the -- prepare the setting  
25 here in terms of the issues we're going to deal with,

1 would you pull out your exhibits. And I'm looking behind  
2 tab 18. It is DJX633-0031 is the first of the exhibits  
3 behind that tab. There are several.

4 A. Yes, sir.

5 Q. These are the pictures that you took. And you  
6 offered them concerning areas which might be subject to  
7 erosion, correct?

8 A. I did not take these pictures.

9 Q. Okay. You were there when these pictures were  
10 taken?

11 A. That's correct.

12 Q. And you're representing to this court that these are  
13 an accurate depiction of these scenes as you viewed them  
14 that day?

15 A. That's correct.

16 Q. And when I look at the first picture, that is  
17 633-0031, I see that in those sunlight areas, the water  
18 there is green. Is that what you recall seeing that day?

19 A. My recollection would be that this --

20 MR. ELROD: Can we all see?

21 MR. BULLOCK: Could you put up 633-0031 of the  
22 defendants'. Why don't we wait for the gallery to catch  
23 up. Would it help for the moment if we just have the  
24 defendants stick it up and --

25 THE COURT: Tell you what, Mr. Bullock, we're

1 sitting at straight up noon, let's just take a recess and  
2 we'll get back to the picture after lunch.

3 MR. BULLOCK: Thank you, Your Honor.

4 (Whereupon a recess was had.)

5

6 REPORTER'S CERTIFICATE

7 I CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT  
8 TRANSCRIPT OF THE PROCEEDINGS IN THE ABOVE-ENTITLED  
9 MATTER.

10

11

S/Terri Beeler  
Terri Beeler, RMR, FCRR  
United States Court Reporter

12

13

14

15

16

17

18

19

20

21

22

23

24

25